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ABSTRACT

Information is presented about requirements, course offerings, financial aid, and personnel for 147 graduate departments of geography in the United States and Canada. Seventy-three offer a Ph.D. in geography, and 77 award the Master's degree. Information provided for each institution includes: date founded; degrees offered; number of degrees granted; numbers of graduate students in residence; chairperson; where to write for further information; a description of the programs and research facilities, the academic plan, admission requirements, and financial aid; staff; faculty; and titles of theses and dissertations completed. A staff directory and a geographical index are provided. (RM)

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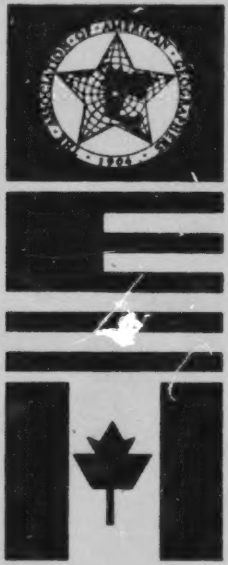
Guide to Graduate Departments of Geography in the United States and Canada 1982-1983

SO 014 375

With Theses and Dissertations Completed During 1981-1982

Guide to Graduate Departments of Geography in the United States and Canada 1982-1983



With Theses and Dissertations Completed During 1981-1982

Copies of the *Guide* may be purchased at the following prices:

- Institutions—$9.00 per copy
- Nonmembers of AAG—$9.00 per copy
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- Prospective Graduate Students—$5.00 per copy

Three copies of the *Guide* will be sent free of charge to the participating departments.

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PREFACE

This is the fifteenth edition of the *Guide to Graduate Departments of Geography in the United States and Canada,* designed to provide college and university departments and students with a current reference for graduate training in geography. It provides a comprehensive listing of information about requirements, course offerings, financial aid, and personnel for colleges and universities.

There are 73 institutions in the U.S. and Canada that offer a Ph.D. in geography; 70 of these are listed in the 1982–1983 *Guide*. Of the 98 institutions that award the Master's degree, 77 are included here. Out of a total of 171 graduate departments of geography in the U.S. and Canada, 147 are listed in the current edition of the *Guide.*

Recently completed dissertations and theses are listed under each graduate school program. This listing provides a permanent record of graduate research in geography. An explanation of the format appears on the page facing the first entry.

Participating department chairpersons and secretaries have cooperated admirably with the production editor, Teresa Mulloy, who is responsible for organizing and copyediting all material. We would like to thank the many individuals who have made this *Guide* possible.

We hope that the *Guide* will continue to be a helpful tool for students and for faculty members assisting students who are selecting graduate programs of geography.

Patricia J. McWethy
Executive Director
Association of American Geographers

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DEGREES OFFERED (Some degrees may be in cooperating departments or among cooperating institutions.)

DEGREES GRANTED 7/1/81-6/30/82 (The number of theses and dissertations listed at the end of an entry may not match these figures if the department did not submit all titles, or if some Master's degrees were awarded on a non-thesis option.)

GRADUATE STUDENTS IN RESIDENCE

GRADUATE STUDENTS NOT IN RESIDENCE

CHAIR

FOR CATALOG AND FURTHER INFORMATION (Departmental address and telephone number.)

PROGRAMS AND RESEARCH FACILITIES

ADMISSION REQUIREMENTS, ACADEMIC PLAN, AND FINANCIAL AID

STAFF (Including highest degree, year and granting institution, rank and specializations.)

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82 (Doctoral dissertations first, followed by Master's theses in alphabetical order by author. Asterisk (*) identifies papers available on interlibrary loan; "Mf," indicates papers available on microfilm, followed by name of depository; e.g.: *Hill, N. Dale.* "Mountain Toponymy in the Basin and Range Province," 1981.* Mf., Univ. Microfilms.)

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University of Akron

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1963 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.A., M.S.

GRANTED 7/1/81-6/30/82: 8

GRADUATE STUDENTS IN RESIDENCE: 14
NOT IN RESIDENCE: 16

HEAD: Allen G. Noble

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Allen G. Noble, Chairman, Department of Geography, The University of Akron, Akron, Ohio 44325
Telephone (216) 375-7620

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts in Geography degree is designed for those graduate students who wish to pursue a traditionally oriented master's program in geography. A thesis is required.

The Master of Science in Geography is structured to fill the needs of those graduate students who wish to pursue a program strongly oriented toward quantitative analysis. A thesis is not written, but at least 9 semester hours of advanced statistics courses must be completed successfully.

Facilities include, in addition to air-conditioned general classrooms and faculty offices, a completely modern cartographic drawing laboratory, with adjoining darkroom and major equipment rooms, an urban analysis laboratory, a physical geography laboratory, graduate student offices, and a selected map, air photo and remote sensing research collection. Major equipment includes Kelsh stereo plotter, digital plotter, electronic calculators, key punch machine, remote computer terminal, overhead map enlarger, field plotters, ERTS zoom transferscope, three dimensional Perspektomat, headliner and varityper, industrial camera, vacuum frame, and map scale changers. A laboratory for cartographic and spatial analysis operates as a part of the Department. Academic emphasis is upon cartography, planning, urban geography, environmental resource planning, and Asian geography.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The academic plan requires four semesters. The plan consists of required technique courses in geography and electives in geography and related fields. Electives include traditional course work, seminars, advanced technique courses and research.

Graduate geography programs are open to qualified students with either an undergraduate major in geography or a major acceptable to the department. Students with inadequate background in geography will be expected to remedy these deficiencies. No foreign language is required for the degree.

Grants are available in the form of teaching and research assistantships.

The Department operates an urban planning internship program with local planning agencies. Interns are paid an amount equivalent to that of teaching assistants (plus compensation for fees) and they work as planners gaining experience as well as receiving academic credit for that experience. Loan facilities are also available.

The national offices of the Pioneer America Society are housed in the Department. Publications produced in the Department include *Ohio Geographers: Recent Research Themes.*

STAFF:

Frank Costa, Ph.D., Wisconsin-Madison, Associate Professor of Urban Studies and Geography—urban, regional and resource planning

Ashok Dutt, Ph.D., Patna (India), Professor of Geography and of Urban Studies—urban, regional and urban planning, South Asia, Southeast Asia

Margaret Geib, B.A., B.S., Kent State, Department Cartographer

Lathardus Goggins, Ph.D., Saint Johns, Associate Professor—Africa, recreation, Anglo-America, climatology

Edward W. Hanten, Ph.D., Pittsburgh, Professor and Director of the Center for Urban Studies—urban, industrial location, regional methodology

Vern Harnapp, Ph.D., Kansas, Associate Professor—physical, Latin America, remote sensing, educational techniques

Albert Korsok, Ph.D., Illinois, Associate Professor—Europe, Soviet Union, economic, history of geographic thought

Laurence Ma, Ph.D., Michigan, Professor—East Asia, cultural, political

Charles B. Monroe, Ph.D., Pennsylvania State, 1974, Assistant Professor—location analysis, transportation, applied geography

John Mulhauser, J.D., Akron, Associate Professor—economic, Anglo-America, cartography, remote sensing

Thomas Nash, Ph.D., Kent State, Professor and Director of the Urban Planning Internship Program—planning, climatology, cartography

Allen G. Noble, Ph.D., Illinois, Professor, Head of the Department—South Asia, cultural, settlement landscape

Deborah Phillips, M.A., Georgia, Supervisor, Laboratory for Cartographic and Spatial Analysis

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Hosler, James. "A Comparative Analysis of Rural and Urban Cemeteries in Summit County, Ohio," 1982.

Jaiswal, Jnotsna. "Disease Patterns in the U.S. (1970) and Their Correlates: A Spatial Analysis," 1982.

Kakish, Saad. "Saudi Arabia Population Growth, Current Trends and Future Prospects as Influenced by National Planning, 1970-2000," 1982.

Mobley, Philip. "A Geographical Model for Solar Space Heating in the United States," 1982.

Nimmer, John. "Proportional Prism Maps: Theoretical and Methodological Components," 1982.

University of Alabama

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1903 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.S.

GRANTED 7/1/81-6/30/82: 2

GRADUATE STUDENTS IN RESIDENCE: 6
NOT IN RESIDENCE: 9

CHAIRMAN: Neal G. Lineback

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor Neal G. Lineback, P.O. Box 1982, University, Alabama 35486
Telephone (205) 348-5095

PROGRAMS AND RESEARCH FACILITIES: The graduate program in Geography is strongly committed to applied geography and to the fields of Regional and Urban Planning. Research and teaching focus on land use analysis, remote sensing, computer cartography, and energy and environmental issues. Recent publications include a state atlas, a computer based map abstract series, a land use-mineral rights ownership map series, and land suitability and land use activity surveys for various parts of the southeast.

The program is closely allied with various city and regional planning agencies in the state and many University of Alabama graduate students are employed by these agencies on a part-time basis or on internships. The Department is equipped for field work and laboratory studies. Facilities include a modern cartographic lab with map-o-graph and zoom transferscope, darkroom, U.S.G.S. map library, weather station, and aerial photo library. The Department is particularly well endowed with computer assets such as a HP 9845A micro-computer W/64 K bytes RAM, two cassette tape drives, internal thermal printer and CRT graphics system. This is linked to a TALOS 648 digitizer with 36" x 48" digitizing area and SMART option, and to a Houston Instruments DP-1-5 11" x 17" digital plotter. The Department has easy access to a UNIVAC 1100/61 time share computer system with a megaword of storage, to a Tektronix 4051 graphics station with digitizer, digital plotter, flexible disk storage, and to a ZETA 6000 series off-line 36" drum, four pen plotter.

Area studies remain a prominent part of the program, offering detailed physical and cultural analysis of Latin America, Soviet Union, Europe and other foreign regions. University graduates, through their academic training, are well prepared for work in the Foreign Service, C.I.A., D.I.A., and other federal agencies.

The graduate program in Geography is designed to include a thesis or a non-thesis track. Under the thesis track the student has considerable latitude to design a program to fit specific needs. The non-thesis track requires a rather strict conformity to specified guidelines. All entering students must specify one of the two tracks during the first semester of academic work. Students selecting the non-thesis track may select one of the following concentrations: Urban Systems Analysis and Management, Natural Systems Analysis and Management, Cultural Systems Analysis and Management, or Foreign Area Analysis.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. The academic program requires the completion of at least 24 to 36 semester hours with at least 12 hours in courses numbered 500 or above. A thesis or non-thesis track may be chosen. The program consists of required technique courses in geography and electives in geography and related fields. The Certificate in Urban and Regional Planning, an option, includes required courses in political science (public administration) and economics.

The graduate geography program is open to qualified students with either an undergraduate major in geography or a major acceptable to the department. A combined score of at least 1000 on the aptitude portions of the GRE and an undergraduate B average are required for unconditional admission. Students may be admitted with less than 1000 GRE on a conditional basis dependent on their grades in geography.

Teaching and research assistantships starting at $4550 for the academic year are regularly granted to well-qualified students. Paid internships are also available with local and regional planning agencies or with the Geological Survey of Alabama. Out-of-state tuition is waived for departmental assistants.

STAFF:

H. Donald Hays, M.A., Michigan, Professor—microclimatology, land use, planning

W. Gary Hooks, Ph.D., North Carolina, Professor—geomorphology, general geology

Travis H. Hughes, Ph.D., Colorado, Professor—environmental geology

Frank D. Huttlinger, M.S., Pennsylvania State, Assistant Professor—cartography, air photo interpretation, Latin American studies

Neal G. Lineback, Ph.D., Tennessee, Professor—urban, economic, computer geography, geographical inventories

Mark E. Neithercut, M.A., Michigan State, Instructor—historical geography, computer cartography

Jeffrey P. Richetto, Ph.D., Ohio State, Assistant Professor—social, economic

Patricia Tamarin, Supervisor, Cartographic Lab—remote sensing

David C. Weaver, Ph.D., Florida, Associate Professor and Director of the Regional and Urban Planning Program—urban, planning, economic, historic

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Bevis, Douglas L. "Commercial Peach Production in Alabama—A Geographic Analysis," 1982.

Maro, Donald S. "Geographical Inventory and Evaluation of Water-Based Recreation on Wheeler Lake," 1981.

Appalachian State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.A., M.A. for teachers

GRANTED 7/1/81-6/30/82: 0

GRADUATE STUDENTS IN RESIDENCE: 7
NOT IN RESIDENCE: 1

CHAIRPERSON: William Imperatore

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Ole Gade
Chairperson, Graduate Committee, Department of Geography, Appalachian State
University, Boone, North Carolina 28608
Telephone (704) 262-3001

PROGRAMS AND RESEARCH FACILITIES: The M.A. in Geography allows emphasis on areas of interest varying from physical and cultural geography to urban/rural planning and recreational site development. Beyond a set of core courses, lecture, independent study, internships and special topics, courses are available with which an individualized program of study can be designed. Also, two tracks in the M.A. for teachers program allow preparation for teaching in the junior/community college or at the secondary school level.

The geography department occupies the fourth floor of a modern science facility adjacent to the main library and contains well equipped cartographic/photo interpretation/remote sensing lab, map library and dark room facilities. A programmable calculator, microprocessing equipment, and a computer terminal, supplemental to the nearby university computer facility, are available within the department.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Graduate geography programs are open to qualified students with an undergraduate major in geography or a major approved by the graduate committee. A number of assistantships are available. Stipends range from $1600-$3600 per year with out-of-state tuition waived in selected cases. Internships in regional, urban and environmental analysis and planning are normally available during the internship period.

STAFF:

Terry E. Epperson, Ph.D., Tennessee, 1960, Professor—economic, Asia, Southern Appalachia

Ole Gade, Ph.D., Michigan State, 1972, Professor—migration, urban and regional development and planning, geographic theory, quantitative methods, Europe

William Imperatore, Ed.D., Georgia, 1970, Professor and Chairperson—geographic education, meteorology, physical

Robert E. Reiman, Ph.D., Florida State, 1964, AICP, Professor and Coordinator of Community and Regional Planning Program—environmental analysis, planning theory, tourist region design, community development

Arthur B. Rex, M.A., Appalachian State University, 1980, Adjunct Instructor—physical geography, cartography

H. Daniel Stillwell, Ph.D., Michigan State, 1961, Professor—physical, biogeography, remote sensing, field techniques, cartography, recreational land use

Zaphon R. Wilson, M.A., Appalachian State University, 1978, Instructor—land use regulations, planning process

Roger A. Winsor, Ph.D., Illinois, 1975, Associate Professor—historical, environmental perception, behavioral, political, research methods

Arizona State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1923 GRADUATE PROGRAM FOUNDED: 1961

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 10 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 21 M.A. 17 Ph.D.
NOT IN RESIDENCE: 9 M.A. 3 Ph.D.

CHAIRMAN: W. Donald McTaggart

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. W. Donald McTaggart, Department of Geography, Arizona State University, Tempe, Arizona 85287
Telephone (602) 965-7533

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts degree requires 30 semester hours; a thesis is required. There is a program designed for: (1) those students planning to continue their graduate career at the Ph.D. level; (2) those students interested in teaching careers at the high school or two-year college levels; (3) those students interested in careers in urban and regional planning or environmental evaluation; and (4) those students wishing to specialize in spatial analysis of land use. Every effort is made to arrange each student's program to fit individual interests, needs, and career objectives. The Ph.D. program emphasizes resource, environmental, and urban geography, and is tailored to student needs.

The large number of faculty and their diverse training provide for a wide range of course offerings and research guidance to include nearly all systematic or regional interests on the part of students. Faculty interest, combined with the location of the University in the greater Phoenix metropolitan area in southwestern United States, provides an ideal laboratory for urban geography, urban climatology, arid land research, and cultural geography. Northern Mexico and the Western mountains are within easy reach for field research.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:
Academic plan—semester system. Admission requirements for M.A.—undergraduate major in geography or 15 semester hours in geography and related fields, with a B average for the last two academic years; for Ph.D.—Master's degree in geography or related field or equivalent, and B average at the graduate level. GRE scores are also used in determining admittance.

Teaching assistantships, university scholarships, and other awards are available. Stipends range from $5,200 to $5,600 for the academic year. Out-of-state tuition is waived for graduate assistants and associates.

STAFF:

William J. Acker, Ph.D., Syracuse, 1969, Associate Professor—regional, economic, military, urban, Europe

Frank T. Aldrich, Ph.D., Oregon State, 1972, Associate Professor—biogeography, cartography/computer graphics, field methodology, remote sensing

Anthony J. Brazel, Ph.D., Michigan, 1972, Associate Professor and Director, Laboratory of Climatology—physical, microclimatology, Alpine climatology, applied meteorology

Andrew M. Carleton, Ph.D., Colorado, 1982, Assistant Professor—meteorology/climatology

Malcolm L. Comeaux, Ph.D., Louisiana State, 1969, Associate Professor—cultural, historical, history of geographic thought, Southwestern United States

Melvin J. Frost, Ph.D., Florida, 1964, Assistant Professor—agricultural, physical, Latin America

Patricia Gober, Ph.D., Ohio State, 1975, Associate Professor—population, regional economic development, urban, elderly migration

William L. Graf, Ph.D., Wisconsin, 1974, Associate Professor—fluvial, man/environment, arid lands, Alpine geomorphology

L. Lloyd Haring, Ph.D., Iowa, 1959, Professor—political, social, research methods

Ray Henkel, Ph.D., Wisconsin, 1971, Assistant Professor—agricultural, Latin America, Africa, environmental

John F. Lounsbury, Ph.D., Northwestern, 1951, Professor—field methodology, land use, research methods, physical, Caribbean America

Melvin G. Marcus, Ph.D., Chicago, 1963, Professor—physical, climatology, environmental, glaciology, Alpine and Polar regions

W. Donald McTaggart, Ph.D., Australian National, 1963, Professor and Chairman—underdeveloped nations, urban, Southeast Asia

Robert C. Mings, Ph.D., Ohio State, 1966, Associate Professor—recreational, economic, Latin America

L. Mayland Parker, Ph.D., Cornell, 1955, Professor—cultural, agricultural, economic, community development

Martin J. Pasqualetti, Ph.D., UC, Riverside, 1977, Assistant Professor—energy and society, energy education, cultural, Mexico

Charles S. Sargent, Jr., Ph.D., UC, Berkeley, 1971, Associate Professor—urban, historical, Europe, Latin America

Guido G. Weigend, Ph.D., Chicago, 1949, Professor and Dean of the College of Liberal Arts—port and ocean transportation, political, Europe and Soviet Union

Leo E. Zonn, Ph.D., Wisconsin-Milwaukee, 1975, Associate Professor—social and urban, population, land use

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Manera, Paul A. "Impact of the Ground Water Supply on Population of the Cave Creek Area, Maricopa County, Arizona," 1982.*

Master's:

Estabrook, Thomas H. "Vegetation Disturbance in Phoenix South Mountain Park, Arizona," 1981.*

Keon, Theodore L. "Recurrent Nocturnal Temperature Rises, Salt River Valley, Arizona," 1982.*

Ligocki, Clemenc A. "Spatial Analysis of Automobile Parking in Downtown and Uptown Phoenix, Arizona," 1981.*

Wilson, Neil S. "Man and Vegetation in Oak Creek Canyon, Arizona," 1981.*

University of Arizona

DEPARTMENT OF GEOGRAPHY AND REGIONAL DEVELOPMENT

DATE FOUNDED: 1961 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A., M.Ed., Ph.D.

GRANTED 7/1/81–6/30/82: 1 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 15 M.A. 10 Ph.D.
NOT IN RESIDENCE: 2 M.A.

HEAD: Lay James Gibson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Lay James Gibson, Department of Geography and Regional Development, University of Arizona, Tucson, Arizona 85721
Telephone (602) 626–1652, 1526

PROGRAMS AND RESEARCH FACILITIES: Candidates for the Master of Arts degree must earn 30 units of graduate credit, not more than 6 of which may be awarded for an optional thesis. Four specific courses are required: The Summer Field Camp, Advanced Physical Geography, Advanced Cultural Geography, and History of Geographic Thought. The Master of Education degree with a major in geography requires at least 32 units in Geography and in Education, but no thesis.

The Ph.D. requires completion of the M.A. requirements, specialization in one topical and one regional area, two foreign languages or one foreign language plus acceptable quantitative skills, and an original dissertation.

Fields of special emphasis include cultural-historical geography, economic geography and regional development, some aspects of physical geography, urban geography, Anglo-America, Arid Lands, and Latin America.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system; Field Camp offered in summer only. GRE scores, Aptitude and Advanced, required for admission. Several assistantships with stipends beginning at $5000 (one-half time) and including remission of out-of-state tuition are available to qualified applicants. Applications for assistantships must be complete by February 15.

STAFF:

D. Robert Altschul, Ph.D., Illinois, 1966, Associate Professor—rural settlement, physical, Africa

Daniel D. Arreola, Ph.D., UCLA, 1980, Visiting Assistant Professor—cultural, historical

Michael E. Bonine, Ph.D., Texas, 1975, Assistant Professor of Oriental Studies—Middle East, Middle Eastern urbanism

Terence Burke, Ph.D., Birmingham, 1967, Visiting Professor—economic and political geography, Western Europe

Judith M. Dworkin, Ph.D., Clark, 1978, Assistant Professor of Hydrology and Water Resources—water resources, resource management

Lay James Gibson, Ph.D., UCLA, 1968, Professor—economic, urban, regional development

Melvin E. Hecht, Ph.D., Kansas, 1962, Professor—U.S. historical-cultural, the Southwest

Charles F. Hutchinson, Ph.D., UC, Riverside, 1978, Program Director, Applied Remote Sensing, Office of Arid Lands Studies—remote sensing, physical, arid lands

Janice Monk, Ph.D., Illinois, 1972, Associate Director, Southwest Institute for Research on Women—women's studies, geographic education, minority settlement

Gordon F. Mulligan, Ph.D., British Columbia, 1977, Assistant Professor—economic, urban, regional development

Leland R. Pederson, Ph.D., UC, Berkeley, 1965, Professor—historical, cultural, Latin America

David A. Plane, Ph.D., Pennsylvania, 1981, Assistant Professor—migration, transportation, regional development

Richard W. Reeves, Ph.D., UCLA, 1970, Professor—geomorphology, arid lands, cartography

Thomas F. Saarinen, Ph.D., Chicago, 1966, Professor—perception of environment, resource management, urban

Robert E. Dickinson, Professor Emeritus

Dan Stanislawski, Professor Emeritus
Andrew W. Wilson, Professor Emeritus

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:
Ph.D.:

El-Babour, Mansour Muhammad. "Urban Networks in Eastern 'Abbasid Lands: An Historical Geography of Settlement in Mesopotamia and Persia, Ninth and Tenth Century, A.D.," 1981.

University of Arkansas, Fayetteville

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1948 GRADUATE PROGRAM FOUNDED: 1949

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 4

GRADUATE STUDENTS IN RESIDENCE: 10
NOT IN RESIDENCE: 5

CHAIRPERSON: John G. Hehr

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. John G. Hehr, Chairperson, Department of Geography, University of Arkansas, Fayetteville, Arkansas 72701
Telephone (501) 575-3159

PROGRAMS AND RESEARCH FACILITIES: The department offers a program of instruction and research leading to a Master of Arts degree. A minimum of 30 semester hours of graduate work is required to complete the degree. The department is particularly strong in the areas of physical geography (geomorphology, meteorology, climatology) and cartography, but programs in certain areas of human geography can be tailored to meet the needs of individual students. Students are also encouraged to take appropriate courses related to their interests in other departments. Research facilities include a university library with an extensive collection of geography publications and maps, a university computer system with computer-assisted mapping peripherals, and a departmental microcomputer laboratory with capabilities for digital color mapping, classification of satellite imagery, and statistical analysis. The department also operates a tree-ring laboratory supported by the National Science Foundation.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University is on the semester system. Acceptance by the University Graduate

School is prerequisite to admission by the department. Half-time teaching and research assistantships are available for the nine-month academic year and include remission of all tuition.

STAFF IN GEOGRAPHY:

John C. Dixon, Ph.D., Colorado, 1982, Assistant Professor—geomorphology, Alpine processes, oceanography

Thomas O. Graff, Ph.D., Kansas, 1973, Associate Professor—population, location theory, quantitative methods

John G. Kehr, Ph.D., Michigan State, 1971, Assistant Professor—meteorology, climatology, Latin America

O. Orland Maxfield, Ph.D., Ohio State, 1963, Professor—geographic thought, natural resources, urban, historical U.S.

Earl M. Neel, Ph.D., Tennessee, 1963, Assistant Professor—cultural, manufacturing, Monsoon Asia

Richard M. Smith, D.A., Northern Colorado, 1974, Assistant Professor—cartography, social

David W. Stahle, M.A., Arkansas, 1978, Research Associate and Director of Tree-Ring Laboratory—dendrochronology, archeology

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Guttierrez, Phillip R. "The Channelization of Mexican Nationals to the San Luis Valley of Colorado," 1982.*

Makarastamkul, Patcharee. "Remotely Sensed Interpretation of Tropical Rural Land Use in Western Thailand," 1981.*

Ball State University

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

DATE FOUNDED: 1965 GRADUATE PROGRAM FOUNDED: 1955

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 4

GRADUATE STUDENTS IN RESIDENCE: 9
NOT IN RESIDENCE: 6

CHAIRMAN: Gerald R. Showalter

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman Department of Geography and Geology, Ball State University, Muncie, Indiana 47306—for Department information. Catalog—Graduate information: Graduate School, Ball State University, Muncie, Indiana 47306.
Telephone (317) 285-6275

PROGRAMS AND RESEARCH FACILITIES: Graduate work through the Master of Arts degree in Geography and Earth Science. A cognate (minor) is available in geography or earth science on the doctorate program in Education. The department maintains close ties with various departments and programs in the College of Sciences and Humanities, College of Architecture, and College of Business. Special research and work facilities include cartography, aerial photography, remote sensing, earth science, and physical geography laboratories, a fully equipped weather station, map collection, materials resource center, computer terminals, and microcomputers.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Admission requirements comply with those of the University; forms obtainable from the Office of Admissions. Autumn, Winter, and Spring quarters, and two summer terms of five weeks each. Graduate assistantships $3300 per academic year available. Partial remission of fees.

STAFF:

George F. Beatty, Ph.D., Illinois, 1958, Professor—land utilization, agricultural-rural, physical, Asia

Thomas P. Crimes, Ph.D., Kentucky, 1972, Associate Professor—physical, recreation, history and philosophy, quantitative methods

Barry N. Haack, Ph.D., Michigan, 1977, Assistant Professor—remote sensing, physical, wind energy simulation models, Africa

Emlyn Trevor Jones, M.A., McMaster, 1970, Keele, 1972, Adjunct Professor—social/economic, Europe (London Centre)

Edward E. Lyon, Ph.D., Ohio State, 1972, Professor—education geography, physical, Anglo-America, geomorphology

Charles E. Martin, B.A., Syracuse, 1980, Staff Cartographer—computer-assisted cartography, computer programming

Tom L. Martinson, Ph.D., Kansas, 1969, Professor—cultural, agricultural, bibliography, teaching strategies, Latin America

Raymond A. Peterson, Ph.D., Florida, 1967, Associate Professor—agricultural land use, U.S. and Canada, remote sensing

Meera Schoen, Ph.D., London, 1951, Associate Professor—Third World urbanization, cultural, Asia

Gerald R. Showalter, Ph.D., Illinois, 1973, Associate Professor—thematic cartography, agricultural development, marketing, tourism, Caribbean

Michael E. Sullivan, Ph.D., Illinois, 1972, Associate Professor—industrial, location, urban-social

Carlos R. Valenzuela, M.A., International Institute for Aerial Surveys and Earth Science, 1977, Instructor—remote sensing, numerical analysis

David L. Wheeler, Ph.D., Michigan, 1962, Professor and Dean of the Graduate School—historical geography, land utilization

Boston University

DEPARTMENT OF GEOGRAPHY

GRADUATE PROGRAM FOUNDED: 1922

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 0 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 28

CHAIRMAN: T. R. Lakshmanan

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. R. B. Batchelder, Director of Graduate Studies, Department of Geography, Boston University, 48 Cummington Street, Boston, Massachusetts 02215
Telephone (617) 353-2525

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers a strong training that emphasizes traditional geographic theory, quantitative techniques, and environmental and policy studies. Analytical rigor combined with training in decision and policy analysis provides graduates with flexibility for choosing a career in government at environmental, economic and resource analysis levels, cartography, research institutes, consulting firms, or international organizations.

Special emphasis of graduate study in the department lies in five subfields within the discipline: 1) urban and regional analysis and policy; 2) environmental systems and resource analysis; 3) energy analysis and policy; 4) geography of development; and 5) cartography. Opportunities exist in the department for graduate student participation in various applied research projects. Faculty have been engaged in research sponsored by such agencies as the National Science Foundation; U.S. Department of Energy; U.S. Environmental Protection Agency; U.S. Health, Education and Welfare Department; First National Bank of Boston; World Bank; United Nations; and U.S. Maritime Administration.

Interdisciplinary opportunities at Boston University are available at the Center for Energy and Environmental Studies, African Studies Center, Center for Latin American Development Studies, Center for Asian Development Studies, American and New England Studies Program, Afro-American Studies, Center for Applied Social Science, and Urban and Regional Planning Program.

University and departmental facilities open to the student include multiple terminals for the Computation Center's IBM 370/158, a cartographic laboratory, computer mapping and digitizing facilities, map library, meteorological station and soils laboratory. Extensive library and museum resources are accessible from the University's central location in Metropolitan Boston. The Boston area provides outstanding research opportunities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Boston University is on the semester system. Prospective graduate students should write the Director of Graduate Studies for applications and instructions for submitting complete credentials. The Graduate Record Examination is requested of all applicants. Financial aid includes Teaching Fellowships of $4,400 plus remission of fees for up to five courses per academic year. Research Fellowships and Graduate Assistantships that provide financial assistance in exchange for research and other departmental duties are also available.

FACULTY:

William Anderson, M.A., Boston, 1980, Instructor—economic, urban, energy and environment

Geoffrey Bannister, Ph.D., Toronto, 1974, Associate Professor and Dean of College of Liberal Arts—urban economic, location theory, regional policy

Robert Batchelder, Ph.D., Northwestern, 1951, Professor—environmental analysis, climatology, air quality, physical oceanography

Alan C. G. Best, Ph.D., Michigan State, 1965, Associate Professor—geography of development, political, Southern Africa

Lata Chatterjee, Ph.D., Johns Hopkins, 1973, Associate Professor—urban and environmental analysis, housing, geography of development

Thomas E. Glick, Ph.D., Harvard, 1968, Professor—environmental history, historical geography, technology and development

Thomas Kontuly, Ph.D., Pennsylvania, 1978, Assistant Professor—geography of development, regional analysis and policy, population, economic, urban

T. R. Lakshmanan, Ph.D., Ohio State, 1965, Professor and Chairman, Director, Center for Energy and Environmental Studies—urban, environmental and energy modeling and policy, geography of development

George K. Lewis, Ph.D., Harvard, 1956, Professor—urban, environmental quality, New England, regional policy

Robert C. Mayfield, Ph.D., Washington, 1961, Professor and Vice President for External Programs—geography of development, South Asia

Judy M. Olson, Ph.D., Wisconsin, 1970, Associate Professor—general cartography, thematic mapping, map perception, automation, quantitative methods

Jeffrey P. Osleeb, Ph.D., SUNY Buffalo, 1974, Associate Professor—urban, economic, energy, regional policy, transportation

Samuel J. Ratick, Ph.D., Johns Hopkins, 1979, Associate Professor and Associate Director, Center for Energy and Environmental Studies—environment, energy, quantitative methods

Chi Ho Sham, M.A., SUNY Buffalo, 1980, Instructor—climatology, water resources, quantitative methods, geomorphology

ADJUNCT FACULTY:

Fred Mogolesko, Ph.D., New York University, 1978, Adjunct Assistant Professor and Environmental Sciences Group Leader, Nuclear Engineering Department Boston Edison Company—environmental and energy modeling and policy, meteorology

VISITING FACULTY:

R. H. Chaudhury, Ph.D., Johns Hopkins, 1973, Senior Research Demographer, *Bangladesh Institute of Development Studies, Dacca*—demography, geography of development

TITLES OF DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Eastman, J. Ronald. "Graphic Organization and the Structuring of Map Data into Memory," 1982.

Bowling Green State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1955 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A., M.A.T.

GRANTED 7/1/81–6/30/82: 7

GRADUATE STUDENTS IN RESIDENCE: 14
NOT IN RESIDENCE: 2

CHAIR: Joseph G. Spinelli

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Adviser, Department of Geography, Bowling Green State University, Bowling Green, Ohio 43403
Telephone (419) 372-2925 or 2926

PROGRAMS AND RESEARCH FACILITIES: The Department has a well-equipped cartography laboratory and darkroom facilities. It also has a VT-100 CRT terminal located in the Department. Students have access to the IBM 370-158 and Univac 1110 computers on campus. The Department is a map depository for various government agencies, including the U.S. Geological Survey and the National Ocean Survey— Great Lakes Series and recently moved its collection to modern quarters in the main library. The main emphases in our graduate work are Urban-Economic, Physical Geography, Cartography, and Cultural-Population, all with an applied orientation. The Department has its own internship program and is one of the University's most active participants in a Cooperative Education Program. *East Lakes Geographer* and *Journal of Cultural Geography* are edited by members of the faculty.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. Maximum stipend of $4161 for graduate assistantships with tuition paid.

FULL-TIME AND PART-TIME STAFF:

Thomas D. Anderson, Ph.D., Nebraska, 1966, Professor—cultural, field methods, land use

William R. Buckler, Ph.D., Michigan State, 1981, Assistant Professor—soils, geomorphology

Joseph C. Buford, Ph.D., UCLA, 1962, Professor—political, Europe

Alvar W. Carlson, Ph.D., Minnesota, 1970, Professor—rural development, recreation, ethnicity

Stephen S. Chang, Ph.D., UCLA, 1971, Associate Professor—cultural, conservation, resources/regional development

Paul V. Crawford, Ph.D., Kansas, 1969, Professor—cartography, geomorphology, soil

Ralph W. Frank, Ph.D., Northwestern, 1952, Professor—economic, Asia, education

Glen R. Frey, Ph.D., Wisconsin-Milwaukee, 1972, Associate Professor—climatology, meteorology, hydrology

Jeffrey J. Gordon, Ph.D., Syracuse, 1978, Assistant Professor—cultural, economic

John Hiltner, Ph.D., Northwestern, 1958, Professor—urban, Middle East, gerontology

John W. Kunstmann, Ph.D., Northwestern, 1964, Associate Professor—physical, air photo, remote sensing

Mohan N. Shrestha, Ph.D., Iowa, 1969, Professor—economic, quantitative analysis, computer mapping

Bruce W. Smith, Ph.D., Illinois, 1970, Professor—industrial location, gerontology, regional development

Joseph G. Spinelli, Ph.D., Florida, 1973, Associate Professor/Chairman—population, Latin America, Commonwealth Caribbean

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Gea, Yueh-Feng Frances. "Spatial Patterns of Income Distribution in Michigan, 1950-1970," 1982.

Brigham Young University

DEPARTMENT OF GEOGRAPHY

FOR FURTHER INFORMATION WRITE TO: Russell N. Horiuchi, Chairman, Geography Department, Brigham Young University, Provo, Utah 84602
Telephone (801) 378-3851

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Clifford, Gary Linn. "The Emerging Legal Status of the Comprehensive Plan," 1981.*

Garlick, Brent D. "Forecasting Residential Growth Patterns in Coban, Guatemala: A Method and Model," 1981.*

Maxfield, Brent W. "Population Movement and Growth in Utah County, Utah 1940 to 1980," 1981.*

Phelps, Berry W. III. "Summary and Critique of Oregon's Land Use Planning Program," 1981.*

California State University, Chico

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 4

GRADUATE STUDENTS IN RESIDENCE: 10
NOT IN RESIDENCE: 0

CHAIRMAN: Richard Halman

FOR FURTHER INFORMATION WRITE TO: Graduate Advisor, Department of Geography, California State University, Chico, California 95929
Telephone (916) 895-5285

PROGRAMS AND RESEARCH FACILITIES: The master of arts program in geography is intended to broaden the training and to prepare qualified students for: (1) public schools and community college teaching in geography and social science; (2) advanced academic work preparatory to the doctorate at other institutions; and (3) employment in public service and the private sector where an advanced degree is desirable.

Students may concentrate their studies in either physical or cultural geography and/or Planning and Development of the Rural Environment.

The department offers excellent facilities for study in geography. It occupies most of the fifth floor of a seven-story, air-conditioned, classroom-office building (Butte Hall). The facilities include the Geographical Services Office which houses an extensive collection of maps, technical equipment and slides which are available for student use.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: California State University, Chico operates two semesters and summer sessions. Applicants wishing to pursue a master's degree must have an acceptable baccalaureate degree with an undergraduate grade point average of at least 2.75 in the last sixty semester units and 3.00 in the last thirty semester units, and a grade point average of at least 3.00 in all post-baccalaureate graduate level coursework taken. If undergraduate geography work is deficient, the applicant will be required to take courses prescribed by the graduate committee.

Depending on the budgetary allocations, the graduate program in geography may offer two or three assistantships per academic year. The assistantships are granted to qualified graduate students to teach and do research in the department. Teaching is generally in laboratories in air photo interpretation. Research is generally related to various department and faculty study-related requirements. Awards are made on a competitive basis.

STAFF:

Bruce E. Bechtol, Ph.D., Oregon, 1969, Professor—man and environment, field methods, Latin America, spatial concepts

Roland Berger, Ph.D., Wisconsin, 1973, Professor—planning, economic development, appropriate technology

William Collins, Ph.D., Cincinnati, 1974, Professor—urban, quantitative, location analysis, planning

Richard Haiman, Ph.D., UCLA, 1973, Professor and Chairman—physical, biogeography, field geography, Latin America

Ladd L. Johnson, Ph.D., UCLA, 1970, Professor—cultural, political, population, water resource development, lesser developed countries

Arthur E. Karinen, Ph.D., Maryland, 1959, Professor—cartography, population, historical, recreation and tourism

David W. Lantis, Ph.D., Ohio State, 1950, Professor—physical, California, Anglo-America, Europe

Gene E. Martin, Ph.D., Syracuse, 1955, Professor—cultural, field methods, Latin America

Ralph F. Meuter, Ph.D., Oklahoma, 1970, Professor—economic, location analysis, urban, regional and community planning (Dean, University Continuing Education)

Louis J. Mihalyi, Ph.D., UCLA, 1969, Professor—economic, political, sub-Saharan Africa, aerial photo interpretation, forestry

Edward L. Myles, Ph.D., Michigan, 1973, Associate Professor—urban, economic, planning, Australia, Anglo-America, spatial concepts

Frank Seawall, Ph.D., Pennsylvania State, 1957, Professor—physical, transportation, urban, Anglo-America

Margaret Trussell, Ph.D., Oregon, 1969, Professor—man and environment, historical, agricultural, map reading and interpretation

Jerry R. Williams, Ph.D., Florida, 1969, Professor—cultural, economic, Latin America, tropics

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Armento, Gregory. Three Research Papers: "Published Works of Chauncy Harris," "California Park," "Performance Zoning," 1982.

Habiger, Frank. "Natural Hazard Potential Associated with a Volcanic Eruption of Mt. Shasta," 1982.

Muenzberg, W. Randall. "The Local Agency Formation Commission for Water Resources Planning in Eldorado County, California: A Case Study," 1982.

**Pemberton, Leland Dale.* "Motivations and Expectations of Persons Buying Land at Lake of the Pines, Nevada County, California: A Study Examining the Development, Occupancy, and Future of a Planned Recreational Community," 1981.

*Special Major

California State University, Fresno

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1925 GRADUATE PROGRAM FOUNDED: 1964

DEGREES OFFERED: M.A.

GRANTED 7/1/81–6/30/82: 2

GRADUATE STUDENTS IN RESIDENCE: 17
NOT IN RESIDENCE: 2

CHAIRMAN: Stanley F. Norsworthy

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Department of Geography, California State University, Fresno, Fresno, California 93740
Telephone (209) 294-2797

PROGRAMS AND RESEARCH FACILITIES: The Geography Department is authorized to grant the Master of Arts Degree with a major in Geography. The student may select one of two programs: Plan A (thesis) and Plan B (non-thesis). Plan A is designed to provide a thorough preparation leading to careers in research and scholarly work or in college or university teaching. Plan B is designed for those who will profit from a broader range of knowledge in geography rather than a more specific research interest. The objective of both plans is to provide a thorough preparation in general geography; experience in conducting independent research; and an opportunity for limited specialization.

The department is housed in the New Science Building. Excellent facilities are available for student use.

MASTER OF ARTS DEGREE IN GEOGRAPHY (THESIS PLAN)

1. Required courses: 9 units—Research and Writing (3); Thesis (6)
2. Select from the following seminars, including one physical, one human systematic, and one regional seminar, 9 units appropriate to program objective—Seminars: economic; human; physical; selected regions.
3. Electives in geography: 6-9 units.
4. Electives outside of geography: 3–6 units.
5. Total required: 30 units.

MASTER OF ARTS DEGREE IN GEOGRAPHY (NON-THESIS PLAN)

1. Required courses: 3 units—Research and Writing (3); Geographic Thought (3).
2. Select 15 units from the following seminars including one physical, one human systematic, and one regional seminar—Seminars: economic; human; physical; selected regions.
3. Electives in geography: 6–9 units.
4. Electives outside of geography: 3–6 units.
5. Total required: 30 units.

In addition to the course requirements, applicants for the Master of Arts Degree must meet the entrance standards of the University and pass the department's qualifying examination. There will be a final written examination for non-thesis plan students and an oral thesis defense for thesis plan students.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: CSU, Fresno operates on the semester system (plus summer session). The general graduate school admission requirements are described in the CSU, Fresno *Bulletin*. Various forms of financial aid are available to graduate students. The graduate assistantship application deadline is April 1.

STAFF:

Michael Biechler, Ph.D., Michigan State, 1970, Professor and Assistant Vice President for Academic Affairs—agriculture, Latin America, population, natural resources

Chester F. Cole, Ph.D., Nebraska, 1951, Professor—political, historical

John A. Crosby, Ph.D., Washington, 1959, Professor—urban, map-air photo interpretation

Roger E. Ervin, Ph.D., Florida, 1954, Professor—Pacific world, soils

E. Frank Koller, Ph.D., Pennsylvania State, 1964, Professor—energy resources, Europe

James S. Kus, Ph.D., UCLA, 1972, Professor—cultural, Latin America

Robert E. Lee, Ph.D., UCLA, 1966, Professor—U.S.S.R., Africa, political

Charles G. Markham, Ph.D., UC, Berkeley, 1967, Professor Emeritus—climatology, Latin America, quantitative techniques

Richard C. Montgomery, Ph.D., Nebraska, 1962, Professor—landforms, environmental studies

Donald L. Morgan, Ph.D., UC, Davis, 1972, Professor—meteorology, hydrology, environmental studies

George N. Nasse, Ph.D., Michigan, 1960, Professor—field geography, Middle East

Stanley F. Norsworthy, Ph.D., UCLA, 1970, Professor and Chairman—arid-lands, Canada, plant geography

William F. Slusser, M.A., CSU, Northridge, 1968; M.S., Utah State, 1973, Equipment Technician—meteorology

Merrill M. Stuart, Ed.D., Teachers College, Columbia, 1968, Professor—economic, California

Jerry C. Towle, Ph.D., Oregon, 1974, Professor—cultural, environmental studies

Paul Vander Meer, Ph.D., Michigan, 1973, Professor—East Asia, cartography, land use

TITLES OF THESES COMPLETED 7/1/81-6/30/82:
Master's:
Hachimura, Keiko. "Japanese Farming in Fresno County, California: Prewar and Postwar Patterns," 1981.*

California State University, Fullerton

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1959 GRADUATE PROGRAM FOUNDED: 1967

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 1

GRADUATE STUDENTS IN RESIDENCE: 16
NOT IN RESIDENCE: 7

CHAIR: Wayne N. Engstrom

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Advisor, Department of Geography, California State University, Fullerton, California 92634
Telephone (714) 773-3161

PROGRAMS AND RESEARCH FACILITIES: The department offers a program designed primarily for students interested in educational, governmental, and commercial employment. Seminars and advanced courses include work in physical and human geography and frequently focus on themes related to environmental change and planning. Facilities in the computer center and the departmental cartographic laboratory make it possible to provide advanced work in photo-cartography, computer graphics, and quantitative analysis.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The current course of study requires about three semesters of full-time enrollment. Each student normally takes 12 hours of seminars, 3 hours of thesis research, additional advanced courses, and must satisfy a requirement in advanced techniques, for a total of 30 hours. The prerequisite consists of 18 semester hours of geography, reflecting balanced training in physical, human, regional, and technical courses. Approximately three technical assistantships are available.

STAFF:
Arthur D. Earick, Ph.D., Michigan, 1959, Professor Emeritus—U.S. and Canada, travel, urban
H. Peter Eilers, Ph.D., Oregon State, 1975, Associate Professor—biogeography, coasts (on leave)

Wayne N. Engstrom, Ph.D., Wisconsin, 1971, Professor and Chair—geomorphology

Gerald P. Hannes, Ph.D., Illinois, 1972, Professor—climatology

Ronald A. Helin, Ph.D., UCLA, 1961, Professor—Europe, U.S.S.R.

William J. Ketteringham, Ph.D., UCLA, 1972, Associate Professor—Latin America, land use, field methods

Tso-Hwa Lee, Ph.D., Southern Illinois, Carbondale, 1973, Professor—cartography, quantitative

Bill Puzo, Ph.D., UCLA, 1972, Professor—Africa, political, travel

Gertrude M. Reith, Ph.D., Clark, 1963, Professor—California, environmental problems, travel

Imre Sutton, Ph.D., UCLA, 1964, Professor—conservation, law and environment, natural hazards

Barbara A. Weightman, Ph.D., Washington, 1972, Professor—social, cultural, travel

Robert A. Young, Ph.D., Wisconsin, 1975, Associate Professor—urban, planning

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Talbot, Alan. "Baja California: Impact of Mexico Highway One;" and "Mono Lake: Environmental Impact of a Water Resource," 1981.

California State University, Hayward

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1963 GRADUATE PROGRAM FOUNDED: 1969

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 5

GRADUATE STUDENTS IN RESIDENCE: 20
NOT IN RESIDENCE: 5

CHAIRMAN: John H. Vann

FOR CATALOG AND FURTHER INFORMATION WRITE TO: V.K. Shaudys, Graduate Advisor, Department of Geography, California State University, Hayward, California 94542
Telephone (415) 881-3193 (Department Office)

PROGRAMS AND RESEARCH FACILITIES: Graduate study leads to the degree Master of Arts in Geography, with a choice from nine specialties: biogeography, cartography, cultural geography, growth of geographic throught, historical geography, physical geography, regional geography, regional planning, and urban geography. Seminars are focused on intensive, directed readings interspersed with discussions of

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the content, principles, methods and techniques of the selected topic or theme. The intent of the program is to develop a subject to its research frontiers, emphasizing an awareness of both theoretical and pragmatic problems and their significance for the discipline. Seminars are accompanied or followed by directed research yielding oral and written reports intended to motivate the student to recognize problems and to conduct guided investigation of a topic or theme. The program comprises 45 units, including 6 units of thesis or a special project. A graduate internship program is open to students with classified standing. Students must demonstrate proficiency in either a modern foreign language *or* in statistical methods as they apply to geography *or* in mathematics. Cartographic, laboratory, library, and computer facilities are available on campus. The research facilities of the University of California, Berkeley and Stanford University are nearby.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: At present the university operates on a four-quarter, year-round calendar. A student with an undergraduate degree in geography could complete the requirements for the M.A. in three to five quarters. Once admitted, the department may be able to arrange part-time employment as technical assistant.

STAFF:

Herbert M. Eder, Ph.D., UCLA, 1963, Professor—cultural, agricultural, Middle America, the American tropics

Donald G. Holtgrieve, Ph.D., Oregon, 1973, Professor—geographic education, historical, environmental impact analysis

John Lier, Ph.D., UC, Berkeley, 1968, Professor—urban, climatology, population, Europe

Thomas H. Pagenhart, Ph.D., UC, Berkeley, 1969, Associate Professor—water and energy resources, conservation, resource management, Anglo- and Latin America

Vincent K. Shaudys, Ph.D., Ohio State, 1956, Professor—political, regional theory, North America, South Asia, Pakistan (leave of absence, Fall 1982)

Richard S. Thoman, Ph.D., Chicago, 1953, Professor and Graduate Advisor—regional planning and development, economic, North America, growth of geographic thought

William L. Thomas, Ph.D., Yale, 1955, Professor—cultural, geographic theory and philosophy, Southeast Asia, Philippines, East and Southeast Asia, Pacific, tourism

John H. Vann, Ph.D., UC, Berkeley, 1960, Professor and Chairman—physical, geomorphology, alluvial and coastal morphology, Latin America, air photo and remote sensing

Robert E. Winter, Ph.D., candidate, Washington, Lecturer—cartography, map and air photo reading and interpretation

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Gilmour, Malcolm. "Quaternary Location in the San Francisco Metropolitan Region," 1982.

Nakazono, Steven R. "The Cartographer's Role in Timber Stand Mapping," 1982.

Rabia, Caroline D. "The Effects of International Tourism in Kathmandu Valley, Nepal," 1982.

Sack, John S. "Design A Surface Water Monitoring Plan for Western Alameda Co., California," 1982.

Schaffarczyk, Edgar. "A Modelling Approach to Locational Analysis for Health Facilities," 1982.

Zackheim, Ralph S. "Bosnia: The Genesis and Persistence of a Slavic Muslim Culture Area," 1982.

California State University, Los Angeles

DEPARTMENT OF GEOGRAPHY AND URBAN STUDIES

DATE FOUNDED: 1951 GRADUATE PROGRAM FOUNDED: 1952

DEGREES OFFERED: M.A. (Geography)

GRANTED 7/1/81–6/30/82: 3

GRADUATE STUDENTS IN RESIDENCE: 26
NOT IN RESIDENCE: 0

CHAIRMAN: Sin-Fong Han

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Department of Geography and Urban Studies, California State University, Los Angeles, 5151 State University Drive, Los Angeles, California 90032
Telephone (213) 224-3822

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts degree in Geography, at California State University, Los Angeles, requires intensive directed study aimed at depth of understanding and intellectual attainment.

The program is designed to prepare students for teaching at all levels, government employment, and advanced preparation in the fields of Geography and Urban Studies.

The department offers some forty undergraduate courses and five graduate seminars to meet degree program objectives. The instructional program is enriched by special topic classes offered by distinguished foreign visiting professors and regular staff. The department also offers a full quarter of instruction and field experience at a station in Mexico, staffed with an interdisciplinary faculty.

The department recognizes the individuality of each student; hence there is considerable flexibility in the program. The following requirements, however, must be satisfied:

1. A Bachelor's degree in geography or its acceptable equivalent.
2. A minimum of 23 quarter units of graduate courses in Geography which must include at least 4 seminars one of which must be the Nature of Geography .... Minimum 23 quarter units.

3. Electives in Upper Division or Graduate courses in geography
   .... Minimum 14 quarter units.
4. Electives in Upper Division or Graduate courses in field related to geography
   .... 0–8 quarter units.
   Minimum total 45 quarter units.
5. Graduate thesis or comprehensive examination.
6. Competency in a foreign language or statistics.
7. Completion of the program within 7 years.

The department is able to offer limited financial assistance to a few of its deserving graduate students. Inquiries should be directed to the Department Chair.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates year-round on the quarter system. Students can enter the program at the beginning of any quarter. An appropriate baccalaureate degree from an accredited institution and a formal application to the Office of Admissions and Records is required for admission to the University. Students in need of financial assistance to meet educational expenses are invited to correspond with the University's Financial Aids Office.

STAFF:

Richard Arvidson, Ph.D., Johns Hopkins, 1970, Professor—climatology, environmental perception, geomorphology

William Byron, Ph.D., Syracuse, 1954, Professor—cultural, cartography, Middle America

Norman Gosenfield, Ph.D., UCLA, 1973, Associate Professor—cultural, political, urban

Sin-Fong Han, Ph.D., Michigan, 1971, Professor and Chairman—population, location theory, China, developing countries

John Kirchner, Ph.D., Chicago, 1979, Assistant Professor—cultural, transportation, South America

Vincent Mazzucchelli, Ph.D., UCLA, 1973, Associate Professor—cartography, physical, California, deserts

Midori Nishi, Ph.D., Washington, 1955, Professor—cultural, Japan, ethnic minorities

Clement Padick, M.A., UCLA, 1957, Associate Professor—physical, field methods, remote sensing

David Radell, Ph.D., UC, Berkeley, 1969, Professor—cultural, urban, Middle America

John Rees, Ph.D., UCLA, 1971, Associate Professor—cultural, perspectives on environment, Middle America

EMERITUS FACULTY:

Harry Coffin, Ph.D., UC, Berkeley, 1961, Professor
William S. Ting, Ph.D., Glasgow, 1937, Professor

TITLES OF THESES COMPLETED 7/1/81-6/30/82:
Master's:
Grove, Beverly C. "A Study of Areas of High Density of Aged Persons in the City of Miami, Florida—1970," 1982.
Eunice, Jane E. "Geographic Variations of the Cool Season Precipitation Regime in California," 1981.

California State University, Northridge

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1960 GRADUATE PROGRAM FOUNDED: 1960

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 6

GRADUATE STUDENTS IN RESIDENCE: 36

CHAIR: Ralph D. Vicero

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Office of Graduate Studies, California State University, Northridge, Northridge, California 91330
Telephone (213) 885-3532

PROGRAMS AND RESEARCH FACILITIES: Major emphases: cartography, climatology-meteorology, cultural, economic, historical, urban, quantitative, geomorphology. Research facilities: Complete cartographic facilities to support drawing, production, and printing of maps (laboratories, cameras, dark room, press). Computerized climatology laboratory, Sanborn map library (depository for maps of cities west of the Mississippi River—145,000 plates). Research map library (275,000 flat maps, 75,000 air photographs). Quantitative laboratory and computer access.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Admission to program with an adequate geographic preparation and a GPA of 3.0 or better. Provisional admission with GPA of 2.5 and an acceptable GRE score.

FACULTY:
James P. Allen, Ph.D., Syracuse, 1970, Professor—cultural, social, population, Anglo-America
Warren R. Bland, Ph.D., Indiana, 1970, Professor—economic, transportation, manufacturing, Canada
William A. Bowen, Ph.D., UC, Berkeley, 1972, Professor—historical, physical, California

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Arnold Court, Ph.D., UC, Berkeley, 1956, Professor—climatology, quantitative
William Tim Dagodag, Ph.D., Oregon, 1972, Professor—urban, Latin America
Robert Gohstand, Ph.D., UC, Berkeley, 1973, Professor—Soviet Union, cartography
Robert Hoffpauir, Ph.D., Wisconsin, 1974, Professor—cultural, South Asia
David Hornbeck, Jr., Ph.D., Nebraska, 1974, Professor—historical, Southwest U.S., California, economic, applied geography
Robert B. Howard, Ph.D., UCLA, 1974, Associate Professor—geomorphology
Phillip S. Kane, Ph.D., UC, Berkeley, 1975, Professor—geomorphology
Robert B. Lamb, Ph.D., UCLA, 1959, Professor—agricultural, climatology
Gordon Rowland Lewthwaite, Ph.D., Wisconsin, 1956, Professor—historical, Southwest Pacific, history of geographic thought
Gong-Yuh Lin, Ph.D., Hawaii, 1974, Professor—meteorology, cartography
C. Gary Lobb, Ph.D., UC, Berkeley, 1970, Professor—cultural, tropical ecology, Latin America
Elliot G. McIntire, Ph.D., Oregon, 1968, Professor—cultural, Southwest U.S., conservation
Eugene J. Turner, Ph.D., Washington, 1977, Associate Professor—cartography, computer applications
Ralph D. Vicero, Ph.D., Wisconsin, 1968, Professor—historical Anglo-America
I-shou Wang, Ph.D., Minnesota, 1971, Professor—population, East Asia

PART-TIME FACULTY:

Robert M. Newcomb, Ph.D., UCLA, 1958, Associate Professor—historical and contemporary Europe

EMERITUS FACULTY:

John F. Gaines, Ph.D., Nebraska, 1951, Professor—plant geography, California
David A. Henderson, Ph.D., UCLA, 1964, Professor—Mexico, historical, marine resources

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Alazzawi, Saad A. "Boundaries of the Holy Land," 1982.
Duriscoe, Daniel M. "Effects of Fire on Chaparral Soils," 1982.
Kinzell, LaMoyne B. "Stabilizing the Economic Base of Palmdale, California," 1982.
Perry, Julie M. "Impacts of Growth Control: South Coastal Santa Barbara," 1982.

University of California, Berkeley

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1905 GRADUATE PROGRAM FOUNDED: 1908

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81–6/30/82: 9 M.A., 7 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 56
NOT IN RESIDENCE: 23

CHAIRMAN: Allan R. Pred

FOR CATALOG send $2.75 to the Office of the Registrar, 120 Sproul Hall, University of California, Berkeley, California 94720. For admissions application and departmental information write to: Professors Robert Reed and Richard Walker, Graduate Advisors, Department of Geography, 501 Earth Sciences Building, Berkeley, California 94720
Telephone (415) 642-3903

PROGRAMS AND RESEARCH FACILITIES: A 6-million volume library with exceptional special collections in the Bancroft (Western Americana, Latin America) and East Asiatic libraries; a distinguished faculty of nearly 100 other departments and schools; a large computer center; and easy access to the matchless physical and cultural diversity of the San Francisco Bay Area and Northern California.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The department offers graduate training in cultural, economic, urban, social, regional, and physical geography, and places emphasis on the interrelationships among these specialties and related approaches in other disciplines. Cultural geography focuses on processes and relationships in the formulation of human-environment patterns, the culture of cities and rural areas, economic development, cultural influences on resource use, and the history of western and non-western ideas and knowledge of the environment. Urban geography stresses morphogenesis of American and European cities, the role of social forces in shaping cities, and transportation. In economic geography, themes include industrial location, city-system and regional development, and time-space interactions. Studies in environment and natural resources range from vegetational change and plant and animal domestication, species decline and habitat alteration, to government regulation of toxic wastes and land development. In physical geography, the department offers specialized training in structural, climatic, and regional geomorphology, atmospheric processes, paleoclimatology, biogeography, and pollen analysis. All of the fields noted above lend themselves to regional specialization. (See staff listing.) Cartography, statistics, field study and other methods courses are also available.

The department offers financial support in the form of a limited number of teaching assistantships, as well as the Holway Fellowship and Society of Woman

Geographers Fellowship. Outstanding applicants are also considered for University Fellowships. Application deadlines: December 1 for Admission/Fellowship; February 1 for Admission only.

FULL-TIME STAFF:

Roger Byrne, Ph.D., Wisconsin, 1972, Associate Professor—historical biogeography, vegetation history, pollen analysis

Orman Granger, Ph.D., Toronto, 1974, Associate Professor—climatology, micrometeorology, the Caribbean

Peter Hall, Ph.D., Cambridge, 1959, Professor-urban and applied geography

David J. M. Hooson, Ph.D., London, 1955, Professor—Soviet Union, history of geographic thought, political geography

Bernard Q. Nietschmann, Ph.D., Wisconsin, 1970, Professor—cultural geography, cultural ecology, aboriginal environmental knowledge, fishing societies, tropical marine ecology, Latin America, Melanesia

Theodore M. Oberlander, Ph.D., Syracuse, 1963, Professor—structural and climatic geomorphology, deserts, thematic cartography

James J. Parsons, Ph.D., UC, Berkeley, 1948, Professor—Latin America (especially Central America and the Andean countries) and California, tropical biogeography, descriptive economic geography

Allan R. Pred, Ph.D., Chicago, 1962, Professor—time-geographic perspective on the individual and society, the growth and development of systems of cities in advanced economies

Robert R. Reed, Ph.D., UC, Berkeley, 1971, Associate Professor—cultural and historical geography, urbanism in the non-western world, religious geography, Southeast Asia

Hilgard O'Reilly Sternberg, Ph.D., Louisiana State, 1956, Professor—Portuguese America (Brazil) with emphasis on settlement and development in problem areas (Amazonia, the Northeast), humid tropics and the arid zones, the zonal approach to disjunct regions

James E. Vance, Jr., Ph.D., Clark, 1952, Professor—morphogenesis of U.S. and European cities, social structuring of cities, historical transportation geography, Canada

Richard A. Walker, Ph.D., Johns Hopkins, 1976, Assistant Professor—environmental regulation, water resources, industrial location, economic development, Marxist theory, U.S. and California

Michael J. Watts, Ph.D., Michigan, 1979, Assistant Professor—natural hazards, Third World economic development, Africa, peasant economy, human and cultural ecology

PART-TIME STAFF:

Douglas R. Powell, M.A., UC, Berkeley, 1962, Lecturer—California, Alaska, field methods, physical

EMERITUS FACULTY: Clarence J. Glacken; John Leighly; Daniel B. Luten

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Hecht, Susanna B. "Cattle Ranching Development in the Eastern Amazon: Evaluation of a Development Policy," 1982. Mf., Univ. Microfilms.

Lewis, Nancy Davis. "Ciguatera, Health and Human Adaption in the Island Pacific," 1981. Mf., Univ. Microfilms.

Liebman, Ellen. "The Evolution of Large Agricultural Landholdings in California," 1981. Mf., Univ. Microfilms.

Michaelsen, Joel Christian. "Variability in North Pacific Air-Sea Interaction on Climatic Time Scales," 1982. Mf., Univ. Microfilms.

Savage, Victor Roger. "Western Cognition of Nature and Landscape in Southeast Asia," 1982. Mf., Univ. Microfilms.

Storper, Michael Charles. "The Spatial Division of Labor: Technology, the Labor Process, and the Location of Industries," 1982. Mf., Univ. Microfilms.

Yagasaki, Noritaka. "California Floriculture: Cultural Geography of an Ethnic Industry," 1982. Mf., Univ. Microfilms.

Master's:

Bernhardson, Wayne Bruce. "Natural Resources in an Andean Pastoral Economy: The Aymara of Parinacota, Chile," 1982.*

Breton, Stephane Nils. "The Symbolism of Production and Exchange in the Agricultural Rituals of Primitive Societies—The Case Study of the Trobriand Islands," 1981.*

Brower, Barbara Anne. "Policy and Power: The Forest Service and the Range Sheep Industry in Wind River Mountains, Wyoming," 1982.*

Larson, David John. "Ditch and Flume Systems of the Central Sierra Nevada: Evolution of a Water Transfer Network," 1982.*

Polhemus, Deborah Lee. "The Changing Structure of the Agricultural Labor Force in Central Chile," 1982.*

Pudup, Mary Beth. "Urban Growth and Industrial Decentralization in Nineteenth-Century Chicago," 1982.*

Semans, Cheryl Ann. "A Dragon on Water, A Worm on Shore: A Study of Hong Kong's Boat Population," 1982.*

Sobral, Helena Ribeiro. "Sequent Land Use and Environmental Issues in a Subtropical Milieu: The Case of Sao Simao, in the State of Sao Paulo, Brazil," 1981.*

Sullivan, Donald George. "Prehistoric Flooding in the Sacramento Valley: A Sedimentological Study of Little Packer Lake, Glenn County, California," 1982.*

University of California, Davis

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1955 **GRADUATE PROGRAM FOUNDED: M.A. 1965**
Ph.D. 1966

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81–6/30/82: 3 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 10 M.A., 3 Ph.D.
NOT IN RESIDENCE: 5 M.A., 4 Ph.D.

CHAIRPERSON: Marlyn L. Shelton

FOR PROGRAM DESCRIPTION WRITE TO: Graduate Adviser, Department of Geography, University of California, Davis, California 95616
Telephone (916) 752-0790
For catalog, admission forms, and description of financial aid, write to: Dean, Graduate Studies and Research
Telephone (916) 752-0650

PROGRAMS AND RESEARCH FACILITIES: Fields of graduate study include cultural/historical geography (especially of plants, animals, foods, and material culture), physical geography (especially climatology and water, plant geography, and Quaternary environments), economic geography (especially agricultural geography), and urban/social geography. Regional specializations include Anglo-American (particularly California and the West), Latin America, Europe, Soviet Union, Africa, the Middle East, and South Asia, and the American arctic. Familiarity with the methods and contributions of allied disciplines is also stressed; the Davis campus has an unusual number of departments which complement geography, with particular strength in the biological and environmental sciences.

The M.A. degree program calls for completion of 30 quarter units of course work and a thesis, or 36 units and a comprehensive examination.

The doctoral candidate is expected to qualify as a general geographer and as a specialist in two distinct fields, one topical and one regional; a written comprehensive examination and an oral qualifying examination must be passed. Also required is a reading knowledge of two foreign languages, or one language and a program of statistics and mathematics.

Besides having the normal cartographic and map facilities, the department enjoys access to a wealth of library materials, on the campus, in the State Library and other state offices in adjacent Sacramento, and in Berkeley and other communities of the San Francisco Bay metropolitan area. The location of the Davis campus near two major urban centers, its proximity to the Pacific Coast and to the Sierra Nevada and Coast Ranges, and its position in the heart of the Central Valley also provide unusual field opportunities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The Davis campus operates on the quarter system (with two 6-week summer sessions rather than a summer quarter). Forms for admission and for scholarships may be obtained from the Dean, Graduate Studies and Research, University of California, Davis, California 95616. Teaching Assistantships may be applied for directly to the Graduate Adviser, Department of Geography. All applicants must supply GRE Aptitude Test scores and three letters of recommendation, and students from non-English-speaking countries must submit TOEFL scores.

STAFF:

Conrad J. Bahre, Ph.D., UC, Riverside, 1974, Associate Professor—cultural, plant geography, cartography/remote sensing, Latin America, arid lands of America

Dennis J. Dingemans, Ph.D., UC, Berkeley, 1975, Associate Professor—urban, social, economic, Soviet Union

Deborah L. Elliot-Fisk, Ph.D., Colorado, 1979, Assistant Professor—biogeography, arctic/alpine and coastal environments of North America, Quaternary

Howard F. Gregor, Ph.D., UCLA, 1950, Professor—economic, agricultural, North America, California

Louis E. Grivetti, Ph.D., UC, Davis, 1976, Associate Professor—cultural, food and nutrition, Middle East, Africa

Stephen C. Jett, Ph.D., Johns Hopkins, 1964, Professor—cultural, conservation, Native American cultures, southwestern United States

Marlyn L. Shelton, Ph.D., Southern Illinois, 1973, Associate Professor and Chairperson—climatology, water resources, physical systems

Frederick J. Simoons, Ph.D., UC, Berkeley, 1956, Professor—cultural, food habits, domestication, South Asia, Africa

Kenneth Thompson, Ph.D., Northwestern, 1955, Professor—historical, political, perception, California, Western Europe

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Smith, Gary Neil. "From Urmia to the Stanislaus: A Cultural-Historical Geography of Assyrian Christians in the Middle East and America," 1981.

Master's:

Acuff, David Samuel. "Human Perceptions of the Mountain Lion, 1825-1981, with Emphasis on *Felis concolor californica,*" 1982.

Beroldo, Steve John. "A Methodology for Characterizing the Climate of Individual Sites for Energy-Conscious Landscape and Building Design," 1982.

Guthe, William. "A Water Budget Analysis of Runoff and Groundwater Recharge for Smithneck Creek, California," 1981.

University of California, Los Angeles

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1915 GRADUATE PROGRAM FOUNDED: 1934

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 9 M.A., 6 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 34 M.A. 30 Ph.D.
NOT IN RESIDENCE: 3 M.A. 7 Ph.D.

CHAIR: Tom L. McKnight

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Advisor, Department of Geography, University of California, Los Angeles, California 90024
Telephone (213) 825-4655 or 825-1071

PROGRAMS AND RESEARCH FACILITIES: The large staff of the Department covers major research areas in geography. The fields of geomorphology, climatology, biogeography, ecosystem analysis and conservation, cultural geography, urban geography, and regional geography receive special emphasis. Contributing strength to the departmental offerings are many distinguished departments in cognate disciplines in which students are encouraged to do part of their work, and area studies programs embracing most parts of the world.

Laboratories are maintained for work in geomorphology, climatology, biogeography, cartography, remote sensing, and quantitative methods. The Campus Computing Network's IBM 3033 has terminals in the Department.

A thesis is a part of the M.A. program for continuing students. Emphasis is placed on the Ph.D. degree. At least one research tool is required for graduate study, subject to approval by the graduate student's committee.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: UCLA operates on a quarter system; students may enter in the Fall, Winter, and Spring quarters. Students are selected for admission to the graduate program on the basis of a completed B.A. in Geography or an allied field, a high grade point average, the GRE Aptitude Test, and three letters of recommendation. The M.A. is a prerequisite to the Ph.D. degree. University fellowships and teaching assistantships are available on a competitive basis. Application deadline for admission, fellowships, and assistantships: December 30 for following Fall Quarter.

STAFF:

Susan W. Beatty, Ph.D., Cornell, 1981, Assistant Professor—plant ecology, biogeography, soils

Charles F. Bennett, Ph.D., UCLA, 1959, Professor—biogeography (especially human influences on ecosystems), Latin America, humid tropics, conservation, Iberia

Rainer Berger, Ph.D., Illinois, 1960, Professor—scientific dating methods in environmental sciences and archeology, physical geography, geophysics

Henry J. Bruman, Ph.D., UC, Berkeley, 1940, Professor—historical geography of Latin America, culture history of tropical agriculture, agricultural colonization in Brazil, Alexander von Humboldt

William A. V. Clark, Ph.D., Illinois, 1964, Professor—urban, quantitative analysis

Gary S. Dunbar, Ph.D., Louisiana State, 1956, Professor—history of geography, history of travel and discovery, historical, cultural

J. Nicholas Entrikin, Ph.D., Wisconsin-Madison, 1975, Associate Professor—urban, geographic thought

Gerry A. Hale, Ph.D., UCLA, 1966, Associate Professor—sociocultural geography, especially capitalism, inequality and hegemony in the modern world, Northeast Africa, Middle East

James Johnson, Ph.D., Michigan State, 1980, Assistant Professor—social geography

Huey Louis Kostanick, Ph.D., Clark, 1948, Professor—political, Europe and Soviet Union, special interests: world problem areas and demographic migrations and changes in Eastern Europe and the Soviet Union

Richard F. Logan, Ph.D., Harvard, 1949, Professor—geography of arid lands, field techniques, California, Southern Africa

Tom L. McKnight, Ph.D., Wisconsin, 1955, Professor and Chairman—North America, Australia and the Southwest Pacific, cultural zoogeography, conservation

Howard J. Nelson, Ph.D., Chicago, 1949, Professor—metropolitan Los Angeles, urban

Antony R. Orme, Ph.D., Birmingham, 1961, Professor—geomorphology, environmental systems and planning, Quaternary studies, western North America, Southern Africa, Ireland

Christopher L. Salter, Ph.D., UC, Berkeley, 1970, Associate Professor—cultural geography with a regional focus on China, field analysis in cultural geography, landscape in literature and landscape aesthetics

Jonathan D. Sauer, Ph.D., Missouri Botanical Garden and Washington University, St. Louis, 1950, Professor—plant geography, plant migration, historical geography of crops and weeds, tropical coastal and island vegetation

Allen Scott, Ph.D., Northwestern, 1965, Professor—economic geography

Susan J. Smith, A.B.D., Oxford, Visiting Assistant Professor—social geography

John D. Stephens, Ph.D., Michigan State, 1975, Visiting Assistant Professor—cartography, computer cartography

Werner H. Terjung, Ph.D., UCLA, 1966, Professor—climatology, especially exchanges of energy, mass and momentum, and process-response systems in physical geography

Norman J.W. Thrower, Ph.D., Wisconsin, 1958, Professor—history of cartography, cartography (especially thematic mapping), remote sensing (especially land use mapping from hyper-altitude imagery), Western Europe

Stanley W. Trimble, Ph.D., Georgia, 1973, Associate Professor—conservation, hydrology, fluvial geomorphology, research techniques

Hartmut Walter, Ph.D., Bonn, 1967, Professor—biogeography, experimental conservation, zoogeography, Mediterranean-type ecosystems, Africa, Europe, Middle East

Frank Weirich, A.B.D., Toronto, Acting Assistant Professor—physical, geomorphology

Walter E. Westman, Ph.D., Cornell, 1971, Professor—plant ecology, nutrient cycling, environmental impact analysis, water quality management, statistical methods, Australia, California

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Beaton, Joseph P. "A Hollywood Case Study of District Issues: The Standardization of Boundaries, an Inventory of Key Functions, and Conflicting Evaluations of District Conditions," 1981. Mf., Univ. Microfilms.

Block, Robert H. "The Whitney Survey of California," 1860-74: A Study of Environmental Science and Exploration," 1982. Mf., Univ. Microfilms.

Lamprecht, James L. "Regional Alienation: The Case of Corsica," 1981. Mf., Univ. Microfilms.

Mohamad Ali, Galal. "Sudan's Industries: A Socio-Spatial Analysis," 1980. Mf., Univ. Microfilms.

O'Donnell, Dennis J. "Manatees and Man in Central America," 1981. Mf., Univ. Microfilms.

Place, Susan E. "Ecological and Social Consequences of Export Beef Production in Guanacaste Province, Costa Rica," 1981. Mf., Univ. Microfilms.

Master's:

Adler, Lori L. "The Adjustment of the Yuba River to the Influx of Hydraulic Mining Debris, 1906-1979," 1980.*

Brothers, Timothy. "Historical Change in the Owens River Riparian Woodland," 1981.*

Cimolino, Tony. "*The South Sea Waggoner* of Basil Ringrose," 1981.*

Edwards, Ben G. "The Great Wrong Place: Images of Southern California in the 1930s," 1981.*

Todhunter, Paul. "A Computer Model Validation of the Simulation of Crop Water Requirements and Irrigation Needs," 1981.*

Warf, Barney L. "Nonmetropolitan Population Growth Theory Re-examined: The Case of California," 1982.*

University of California, Riverside

DEPARTMENT OF EARTH SCIENCES

DATE FOUNDED: 1954 GRADUATE PROGRAM FOUNDED: 1962

DEGREES OFFERED: M.A., M.S., Ph.D.

GRANTED 7/1/81-6/30/82: 2 Masters, 1 Ph. D

GRADUATE STUDENTS IN RESIDENCE: 15 Masters, 12 Ph.D.
NOT IN RESIDENCE: 0 Masters, 3 Ph.D.

CHAIRMAN: Michael O. Woodburne

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Homer Aschmann, Department of Earth Sciences, University of California, Riverside, California 92521
Telephone (714) 787-3415 or 3435

The Department of Earth Sciences offers both undergraduate and graduate degrees in geography, geology, and geophysics. The following material describes the program in geography.

PROGRAMS AND RESEARCH FACILITIES: Both the M.A. and M.S. degrees are offered. The M.A. is for students interested in teaching or in pursuing a further degree. It requires satisfactory completion of 36 quarter units of course work and a comprehensive examination. The M.S. is for students interested in applied geography. Its requirements include a thesis.

Candidates for the Ph.D. degree are expected to show basic competence in both physical and cultural geography, and the history and methodology of the discipline. Research problems in Latin America, arid lands, and climatology are favored by the location of the campus as well as the interests of the staff. Recently emphasis has been placed on geographic applications of remotely sensed imagery and automated cartography, supported by a large and diversified collection of images gathered from aircraft and spacecraft.

A well-equipped cartographic laboratory is present in Department quarters, as well as desk and shelf space for all graduate students. The University Library contains a map library which is a depository of the Army Map Service, and subscribes to several hundred periodicals in geography and supporting fields. The complex regional character of Southern California offers many field situations of interest to students of both cultural and physical geography.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of California is on a quarter calendar, although a summer session rather than summer quarter is offered at present. Admission based on previous course work, experience and references. Positions are available to graduate students as Teaching or Research Assistants. Fellowships are available to especially well-qualifed applicants.

GEOGRAPHY STAFF:

Homer Aschmann, Ph.D., UC, Berkeley, 1954, Professor—cultural, Latin America, arid lands

Carl Hansen, Ph.D., Wisconsin, 1966, Associate Professor—geomorphology, Africa, arid lands

Claude Johnson, M.S., UC, Riverside, 1968, Lecturer—remote sensing, automated cartography, agricultural geography

Stephen McRae, Ph.D., Cornell, 1979, Assistant Professor—geographic information systems, environmental planning and impact analysis

Richard Minnich, Ph.D., UCLA, 1978, Assistant Professor—remote sensing, plant geography, climatology

Robert Pease, Ph.D., UCLA, 1964, Professor—physical, California, cartography, urban climatology

Paul Wright, Ph.D., Hawaii, 1979, Lecturer—urban/economic geography, locational analysis, demography

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Ford, Robert E. "Subsistence Farming Systems in Semi-Arid Northern Yatenga (Upper Volta)," 1982. Mf., Univ. Microfilms.

Master's:

Jenkins, Richard C. "Southern Paiute Subsistence in the Eastern Mojave Desert," 1982.*

University of California, Santa Barbara

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1975 GRADUATE PROGRAM FOUNDED: 1975

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 30 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 35 M.A., 20 Ph.D.
NOT IN RESIDENCE: 35 M.A.

CHAIRMAN: Reginald G. Golledge

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Teresa Everett, Graduate Coordinator, Department of Geography, University of California, Santa Barbara, California 93106
Telephone (805) 961-3663

PROGRAMS AND RESEARCH FACILITIES: The department offers specialized graduate training in water resources, vegetation resources, spatial behavior, marine resources, urban and regional modelling, cartography, remote sensing, and quantitative analysis. All graduate students are expected to gain a working knowledge of at least one major computer programming language.

Research facilities include a remote sensing laboratory which contains specialized equipment and a well-equipped cartography laboratory. The campus library with over a million volumes maintains a map library with close to 170,000 sheets of maps and 118,000 items of imagery. The campus computer center houses an Itel AS-6 and a PDP 11/70 which provides interactive Basic. The Computer Systems Laboratory has a VAX 11/780, PDP 11/45 and numerous peripherals. It is used for much Geography research and has over $500,000 of Geography equipment. The location of the campus provides easy access to a wide diversity of environments including the Pacific Ocean marine environment, the agricultural environment of the Central Valley, and the Los Angeles metropolitan region.

The Master's Program offers two plans: 1) 34 quarter units of coursework and a thesis; or 2) 46 quarter units of coursework and a comprehensive examination. Coursework outside the department is actively encouraged where it leads to a stronger program and such courses may account for up to one third of the credits necessary for completion of the degree.

The Ph.D. program is designed around five systematic specialties, (Area A) and three techniques (Area B). The systematic areas (Area A) are Water Resource Geography, Vegetation Resource Geography, Geographical Behavior Systems, Marine Resource Geography, and Urban and Regional Modelling. In addition all students are expected to develop great depth in one or more skills drawn from the following techniques (Area B): mathematical, quantitative and computer analysis; computer cartography and geographical information systems; and remote sensing. A variety of programs can be generated based on selections of major and minor emphases from Areas A and B.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: UCSB operates on the quarter system and incoming students may enter at the beginning of any quarter. Students applying for entrance to the program should have a demonstrated capability in Geography or other appropriate fields, have acquired a high grade-point average (particularly during the last two years), and should submit both their verbal and quantitative GRE scores upon formal application. The department has a number of teaching assistantships and research assistantships available and students may also apply for University fellowships.

STAFF:

Richard L. Church, Ph.D., Johns Hopkins, 1974, Professor—planning and environmental location/allocation modelling, locating and planning public facilities, water resources planning, operations research methods

Donald Disraeli, Ph.D., Massachusetts, 1982, Assistant Professor—plant ecology, coastal geomorphology (joint appointment with E.S.)

Jeffrey C. Dozier, Ph.D., Michigan, 1974, Associate Professor—snow hydrology, energy balance climatology

John E. Estes, Ph.D., UCLA, 1968, Professor—remote sensing, emphasizing sensor systems, land use study, and regional resource base determination and evaluation

Reginald G. Golledge, Ph.D., Iowa, 1966, Professor and Chairman—urban, behavioral, environmental cognition, spatial modelling

Joel Michaelsen, Ph.D., UCB, 1981, Assistant Professor—climatology/meteorology, marine resources

David S. Simonett, Ph.D., Sydney, 1954, Professor and Dean of the Graduate School—remote sensing, soils, agricultural

Raymond C. Smith, Ph.D., Stanford, 1961, Professor—marine resources, physical oceanography, remote sensing of the oceans

Terence R. Smith, Ph.D., Johns Hopkins, 1971, Associate Professor—individual and aggregate decision-making and the application of the methods of artificial intelligence models to such problems

Waldo R. Tobler, Ph.D., Washington, 1961, Professor—cartography, location theory, dynamics of geographical change, geometry of spatial relations, machine processing of geographical data.

Other positions to be filled.

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Richardson, G. Donald. "Spatial Cognition," 1982.

Master's:

Atwater, Susan. "Monitoring Seasonal Change in Chaparral Moisture Content Using Landsat Digital Data," 1981.

Blakley, James. "A Quantitative Analysis of the Associations Between Plant Species in the Shortgrass Prairie of Central Colorado," 1981.

Costanzo, C. Michael. "An Investigation of the Spatial Component in the Effectiveness of Gun Control Laws," 1981.

Frampton, Michael. "Measurement of Snow Surface Temperature from Thermal Satellite Data in the Southern Sierra Nevada," 1982.

Halperin, William. "Market Potential and Consumer Allocation: A Methodology for Comparing Aggregate and Disaggregate Models," 1982.

Ikhuoria, Isi. "Remote Sensing and Environmental Analysis of Urban Land Use Patterns in Benin City, Nigeria," 1981.

Irvin, Edward. "A Regional Comparison of the Probability of Obtaining Multidate Coverage by Radar and Landsat for the U.S.A.," 1982.

Kanani, Simeon. "Land Cover Mapping and Change Detection in Kitui, Kenya: A Remote Sensing Approach," 1981.

Marks, Barbara. "A Method for Estimating Canopy Density Over Large Areas," 1981.

Spanner, Michael. "Soil Loss Prediction in a Geographic Information System Format," 1982.

Wan, Zheng-ming. "A Method for Digital Snow Mapping at Subpixel Resolution from NOAA Thermal Satellite Data," 1981.

Chicago State University

GEOGRAPHY DEPARTMENT

DATE FOUNDED: 1970 GRADUATE PROGRAM FOUNDED: 1958

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 6

GRADUATE STUDENTS IN RESIDENCE: 7
NOT IN RESIDENCE: 26

CHAIRMAN: Irving Cutler

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. G. Munir Ahmed, Chicago State University, Ninety-Fifth Street at King Drive, Chicago, Illinois 60628
Telephone (312) 995-2188

PROGRAMS AND RESEARCH FACILITIES: The flexible M.A. program in geography is designed for students interested in teaching, government, private employment, or further research. Half of the necessary 30 semester hours constitutes a required core program. The other half (5 courses) consists of electives selected from the present offerings of over 30 graduate courses in geography. An M.A. in geography is also offered with a concentration in urban geographic studies. There are no language requirements. Two seminar papers are required in lieu of a thesis and a final comprehensive examination is given before graduation. Work can be pursued either in the day or evening programs or in both.

The library and laboratory facilities are enhanced by the vast resources of the Chicago Metropolitan Area, which also serves as a source of extensive and varied urban field work opportunities. In 1972 the university occupied a completely new $100,000,000 campus containing modern departmental classrooms, laboratories, reading room, and map library.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Admission requirements: (1) a Bachelor's degree with a grade average of B or better although promising students may be admitted conditionally with a slightly lower average and (2) fifteen hours of undergraduate work in geography, although conditional admission is sometimes possible with fewer hours. The school is on the trimester system and has an extensive system of scholarships, assistantships, and loan and work-study programs.

STAFF:

G. Munir Ahmed, Ph.D., Chicago, 1956, Professor—economic, Asia, Middle East, political

Fredrick Blum, M.A., Chicago, 1961, Associate Professor—urban, planning, historical, cultural

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Irving Cutler, Ph.D., Northwestern, 1964, Professor—transportation, industrial, urban, Anglo-America

John Muhr, M.A., Chicago State, 1975, Assistant Professor—cartography, measurement, computer, Africa

Herbert L. Rau, Jr., Ph.D., Northwestern, 1958, Professor—Latin America, regional analysis, physical, climatology

Irvin Roth, Ph.D., Syracuse, 1968, Professor—economic, industrial, planning, teaching of geography

University of Chicago

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1903 GRADUATE PROGRAM FOUNDED: 1903

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 4 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 6 Masters 15 Ph.D.
NOT IN RESIDENCE: 11 Masters 25 Ph.D.

CHAIRMAN: Norton Ginsburg

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Secretary, Department of Geography, University of Chicago, 5828 South University Avenue, Chicago, Illinois 60637
Telephone (312) 962-8300

PROGRAMS AND RESEARCH FACILITIES: Graduate programs in Geography at the University of Chicago at both the Master's and Doctorate levels are tailored to the needs and experience of the individual student. At the Master's level requirements include an orientation course and additional courses in Geography chosen in consultation with the faculty. Doctoral course requirements include the same orientation course as well as a number of other courses in Geography also chosen in consultation with the faculty. At the doctoral level the development of research capabilities in one or more of the following fields is emphasized: cultural geography, historical geography, resources management, political geography, urban geography, environmental geomorphology, Pleistocene ecology, and regional specializations in East Asia, Southeast Asia, East Europe and the Soviet Union, Western Europe, and the Middle East. Each of the regional specializations necessitates study of the relevant cultures and languages. Doctoral dissertations are published in the Department's *Research Papers* which are widely distributed to research libraries in North America and abroad.[1]

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[1] In 1981-82 the following *Research Papers* were published:
No. 198: Johnson, Joseph T. *Location and Trade Theory: Industrial Location, Comparative Advantage, and the Geographic Pattern of Production in the United States.*

No. 201: Licate, Jack A. *Creation of a Mexican Landscape: Territorial Organization and Settlement in the Eastern Puebla Basin, 1520-1605.*

No. 203: Liang, Ernest P. *China: Railways and Agricultural Development, 1875-1935.*

No. 204: Dahmann, Donald C. *Locals and Cosmopolitans: Patterns of Spatial Mobility During the Transition from Youth to Early Adulthood.*

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:

The University of Chicago is on a four-quarter system. Since the orientation course for incoming graduate students takes place in the autumn, new graduate students are advised to initiate their work in that quarter, but it is not necessary that they do so.

Applications for admission should be made to the Office of Admissions and Aid, University of Chicago, 5801 South Ellis Avenue, Chicago, Illinois 60637, on forms obtained from that office. Although applications for admission can be considered at any time, students seeking financial aid should ordinarily file an application for admission and aid before January 15 of the year in which they hope to begin graduate work. Students having questions about opportunities for studies related to their special interests are invited to write to the chairman.

Scholarship and fellowship aid is available on a competitive basis. The Department has no teaching assistantships, but research assistantships are available.

STAFF:

Karl W. Butzer, D.Sc., Bonn, 1957, Henry Schultz Professor of Environmental Archeology—cultural ecology, applied geomorphology

Michael P. Conzen, Ph.D., Wisconsin, 1972, Associate Professor—historical, urban, North America (on leave 1982-83)

Norton Ginsburg, Ph.D., Chicago, 1949, Professor—political, marine affairs, economic development, urban, East and Southeast Asia (on leave 1983)

Chauncy D. Harris, Ph.D., Chicago, 1940, D. Litt., Oxford, 1973, Samuel N. Harper Distinguished Service Professor—Soviet Union, bibliography of geography, urban, economic

James T. Meyer, M.S., Pennsylvania State, 1977, Instructor—urban social geography, research design and methodology

Marvin W. Mikesell, Ph.D., California, Berkeley, 1959, Professor—cultural conflict, Middle East

William D. Pattison, Ph.D., Chicago, 1957, Associate Professor—history of geography, geography in education

Paul Wheatley, Ph.D., D.Litt., London, 1958, Irving B. Harris Professor, Geography and Social Thought—comparative urbanism, historical, East and Southeast Asia

ASSOCIATES:

Doris Holleb, M.A., Harvard, 1947, Professorial Lecturer—urban planning

Jon Leverenz, M.S., Wisconsin, 1960, Senior Lecturer—cartographic techniques

Phillip D. Phillips, Ph.D., Minnesota, 1973, Lecturer—industrial location

Gerson M. Rosenthal, Jr., Ph.D. (Zoology), California, Berkeley, 1954, Associate Professor, Biology (the College)—ecological systems

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Lake, Robert William. "The Social Construction of Space and Place: Community Change in a Residential Suburb," 1981.

Master's:

Baughman, Charles Allen. "The Development of an Artificial Water Transportation Facility along the Potomac River: The Chesapeake and Ohio Canal," 1982.

Di Crisci, Martin A., Jr. "Some Consideration about Displacement in Reviving Inner-City Neighborhoods from Private Market Causes," 1982.

Foster, William R. "Small Hydroelectric Power in New England," 1981.

Kuhar, Jane Ellen. "Physical Form and Social Process in Nineteenth-Century America," 1981.

University of Cincinnati

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1907 GRADUATE PROGRAM FOUNDED: 1931

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 1 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 9 M.A. 5 Ph.D.
NOT IN RESIDENCE: 12 M.A. 9 Ph.D.

HEAD: K. Bruce Ryan

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Director of Graduate Studies in Geography, Department of Geography, University of Cincinnati, Cincinnati, Ohio 45221
Telephone (513) 475-3421

PROGRAMS AND RESEARCH FACILITIES: The Department continues its long tradition of urban research and Community involvement. Within that tradition, four applied programs are offered—locational analysis (geared to site selection and market research for both the public and private sectors); cultural-historical geography (population dynamics and community development); environmental quality and management (including government regulations); and regional development (mainly in the Third World).

Over the years, students of the Department have found employment in planning and development (30 percent of those graduating), education (35%), public administration (7%), and business (28%). Work experience and training in marketable skills are integral parts of the graduate program. In fact, America's first "co-op" system of higher education began in Cincinnati in 1906, and continues to make the city a living laboratory for studies of all kinds. There is also a well-established three-year program leading jointly to the Masters degree in Geography and the Master of Community Planning.

Six million books are available in the twenty research collections that comprise the Cincinnati Libraries Consortium, among them the Archival Library of the AAG. Computer facilities (fifth largest in the U.S.) include AMDAHL 470/V6-II, IBM 1401, and an experimental hybrid system. The Department's quarters in Swift Hall have just been modernized at a cost of $2.7 million, and now contain advanced computer graphics capabilities including a Tektronix Graphic Computing System, digital plotter and graphics tablet.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:

Quarter System. Application for admission to the Geography program of the Division of Graduate Studies, or for graduate aid, obtained by writing to the Department of Geography, University of Cincinnati, Cincinnati, Ohio 45221 for application form and a current Graduate School Bulletin. GRE scores are required.

Financial Aid includes Graduate Assistantships, Research Assistantships, Tuition Scholarships, and University Internships.

STAFF:

Robert B. McNee, Ph.D., Syracuse, 1953, Professor—theory of urban and economic geography, multinationals

Jonathan S. Mesinger, Ph.D., Syracuse, 1977, Assistant Professor—cultural landscape, historical, historic preservation, urban social

Wolf Roder, Ph.D., Chicago, 1965, Professor—resources and economic development, field methods, statistical methods, Africa

Kenneth Bruce Ryan, Ph.D., Australian National, 1966, Professor—rural settlement policy, architectural diffusion, Australia

Roger M. Selya, Ph.D., Minnesota, 1971, Associate Professor—economic development (especially East Asia), population and health, history and philosophy of geography

Robert B. South, Ph.D., Maryland, 1972, Associate Professor—economic, Latin America

Howard A. Stafford, Ph.D., Iowa, 1960, Professor—industrial location, economic, urban

Laurence G. Wolf, Ph.D., Syracuse, 1966, Associate Professor—cartography, cultural, population, urban

ASSOCIATED FACULTY:

David Prosperi, Ph.D., Indiana, 1978, Assistant Professor of Planning—transportation, economic geography, quantitative methods

David P. Varady, Ph.D., Pennsylvania, Associate Professor of Planning—housing, urban residential mobility, social policy

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Kithcart, Phillip E. "Intra-Urban Travel Patterns of the North Nashville, Tennessee, Black Community—1969 and 1975," 1982.

Master's:

Cheng, Leey. "Evaluation Methods and Impacts of Modern Highway Development—A Study Case: The North-South Freeway in Taiwan," 1982.

Clark University

GRADUATE SCHOOL OF GEOGRAPHY

DATE FOUNDED: 1887 GRADUATE PROGRAM FOUNDED: 1921

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 8 M.A., 7 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 45 Ph.D.
NOT IN RESIDENCE: 3 M.A., 25 Ph.D.

DIRECTOR: Leonard Berry

FOR FURTHER INFORMATION WRITE TO: Katherine A. Parella, Administrator, Graduate School of Geography, Clark University, Worcester, Massachusetts 01610
Telephone (617) 793-7337

PROGRAMS AND RESEARCH FACILITIES: The Graduate School of Geography at Clark provides institutional and programmatic alternatives to conventional North American doctoral programs. The School is central to a human-scale, private institution of 2,000 undergraduates and 350 graduate students. A liberal arts tradition is wedded to the University-College in which faculty, graduate students, and undergraduates engage in joint teaching and research and cross-disciplinary exchange. The School offers a comprehensive doctoral program designed for individual needs and for both academic and non-academic career objectives. Approximately half of recent graduates have careers outside academe.

Six major fields of study are emphasized: (1) *cultural geography and the humanities* has concentrations in cultural ecology, in city, space, and culture, and in cultural landscapes; (2) *environmental affairs/management* focuses on resource and technology assessment and impact; (3) *regional/international development/political economy* has components in area development and in Marxist analysis; (4) *urban/social/planning* specializes in economics, housing, and transportation; (5) *physical geography of human systems* concentrates on environmental issues related to human activity; and (6) *cartography* integrates conventional mapping, computer cartography, and remote sensing, and has special interests in environmental and development applications.

The School is active in both individual and group research. It plays a major role in the Center for Technology, Environment, and Development (CENTED), which provides an institutional framework at Clark for numerous interdisciplinary research groups, including Climate and Society, Regional Development, Energy, Technological Hazards, and International Development. Emphasis is placed on the Third World, particularly Africa and Latin America. The School is a critical element in the Program for Humanistic Studies, an interdisciplinary research and teaching program that developed the concept of the "cluster"—a group of parallel and overlapping courses in different fields taught concurrently on a single theme. In addition, three journals are associated with the School: *Economic Geography, Antipode,* and *Monadnock.*

Clark University has a 35-acre campus within Worcester—the heart of central Massachusetts. Nine other universities and colleges are located in the city, four of which form a consortium with Clark. The School is located in the new Academic Center. It houses a Cartographic Laboratory (including extensive drafting and darkroom facilities, instrumentation for remote sensing, and a micro-computer/digitizer system), an extensive Map Library that is a depository for federal agencies, the J.K. Wright Reading Room, a graduate student lounge, and office space for most graduate students. Special research collections are located in CENTED.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system with a summer session at end of spring semester. Three year residency required for Ph.D. (2 years for those entering with an M.A.). *Admission Requirements:* interests coincident with those of department; evidence of competence to pursue graduate work at the Ph.D. level; GRE scores required of U.S. and Canadian students; applicants from related fields will be considered; application deadline—February 15th. *Financial Aid* includes tuition fellowships, research and teaching assistantships.

FULL-TIME FACULTY:

Leonard Berry, Ph.D., Bristol, 1969, Professor of Geography, Director Graduate School of Geography, Co-Director International Development Program—applied geomorphology, East Africa

Martyn J. Bowden, Ph.D., UC, Berkeley, 1968, Professor of Geography—historical-cultural, humanistic studies, urban environmental cognition

Susan Hanson, Ph.D., Northwestern, 1973, Associate Professor of Geography—urban social geography, quantitative methods, travel-activities patterns

Douglas L. Johnson, Ph.D., Chicago, 1972, Associate Professor of Geography—cultural, landscape, economic development, arid lands

Kirsten Johnson, Ph.D., Clark, 1977, Associate Professor of Geography—environmental management, cultural

Gerald J. Karaska, Ph.D., Pennsylvania State, 1962, Professor of Geography and Editor of Economic Geography—urban, economic, quantitative methods

Roger E. Kasperson, Ph.D., Chicago, 1966, Professor of Geography and Government—urban-political decision making, nuclear risk assessment.

Robert W. Kates, Ph.D., Chicago, 1962, Professor of Geography and Research Professor in the Center for Technology, Environment and Development

Robert W. Kates, Ph.D., Chicago, 1962, Professor of Geography and Research Professor in the Center for Technology, Environment and Development

Duane F. Knos, Ph.D., Iowa, 1956, Professor of Geography—geography and its teaching, urban, simulation as a learning process

William A. Koelsch, Ph.D., Chicago, 1966, Professor of History and Geography—history of geography

Laurence A. Lewis, Ph.D., Northwestern, 1965, Associate Professor of Geography—geomorphology, slope processes, food production, soil erosion

David C. Major, Ph.D., Harvard, 1966, Research Professor—water resource economics

Sharon Nicholson, Ph.D., Wisconsin, 1976, Assistant Professor of Geography—climatology, arid lands

J. Richard Peet, Ph.D., UC, Berkeley, 1968, Associate Professor—social, economic, community planning, Marxist geography

Harry E. Schwarz, B.C.E., George Washington, 1964, Professor of Environmental Affairs—water resource planning and water reuse

Harry Steward, Ph.D., Wales (Swansea), 1972, Associate Professor of Geography—cartography, remote sensing imagery

Billie Lee Turner II, Ph.D., Wisconsin, 1974, Associate Professor of Geography—cultural, ecology, agriculture, tropics, prehistory

ADJUNCT FACULTY:

Dennis W. Ducsik, Ph.D., M.I.T., 1976, Assistant Professor of Science, Technology and Society, Adjunct in Geography

AFFILIATE FACULTY:

Anne Buttimer, Ph.D., Washington, 1965, Affiliate Professor of Geography—social, urban, social space, philosophy of geography

Saul B. Cohen, Ph.D., Harvard, 1955, President of Queens College, CUNY, Research Professor of Geography—political, educational networks

Daniel M. Dworkin, Ph.D., Clark, 1974, Affiliate Associate Professor of Geography—water resources, international development

Philip O'Keefe, Ph.D., London, 1973, Affiliate Associate Professor of Geography—resource economics, natural hazards, underdeveloped countries, Marxist resource theory

EMERITUS:

Raymond E. Murphy, Ph.D., Professor of Geography Emeritus

STAFF:

Michael Dulka, Map and Geography Librarian
Timothy Fast, Cartographer and Laboratory Manager
Katherine A. Parella, Administrator

TITLES OF DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Berry, Eileen. "The African Family Household—A Behavioral Model," 1981.

Bomah, Andrew Kelvinson. "An Analysis of the Physical and Landuse Variables Affecting Soil Erosion in the Njala Area of Sierra Leone, Southern Province," 1982.

Ferguson, Kevin. "Human Activity and Slope Contribution of Sediment to an Estuary: Case Study North River, Massachusetts," 1982.

Gibson, Katherine Dorothea. "Structural Change Within the Capitalist Mode of Production: The Case of the Australian Economy," 1981.

Hosier, Richard. "Something to Buy Paraffin With: An Investigation into Domestic Energy Consumption in Kenya," 1982.

Odemerho, Francis Obukohwo. "The Dynamics of Stream Hydraulic Variables: Implications for Planning Traditional Agriculture in Southwest Nigeria," 1982.

Way, Douglas. "Drainage Density: A Function of Rock Properties, Relief, and Climate," 1982.

University of Colorado

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1927 GRADUATE PROGRAM FOUNDED: 1930

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 11 M.A., 8 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 50 M.A. 19 Ph.D.
NOT IN RESIDENCE: 2 M.A. 4 Ph.D.

CHAIRMAN: A. David Hill

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Secretary, Department of Geography, Campus Box 260, University of Colorado, Boulder, Colorado 80309
Telephone (303) 492-8311

PROGRAMS AND RESEARCH FACILITIES: Faculty members based on the University's campuses in Boulder, Colorado Springs, and Denver jointly form the Geography Graduate Faculty. The basic purpose of the program is the training of scholars who will continue to produce knowledge and of professionals with outstanding promise for success in the public and private sectors. The program offers advanced training, including formal course instruction, research guidance, and other professional experiences, in both physical and human geography. Research strengths are in arctic and alpine processes, snow and ice studies, geomorphology, climatology, biogeography, conservation, cultural, social, urban, regional development, and geographic education. Although students' programs are highly individualized, each student must take work in both human and physical geography, and demonstrate a command of the history and nature of the discipline and of a variety of modes of analysis and of geographic skills.

The Department maintains teaching and research relationships with the Institutes of Behavioral Science (IBS) and of Arctic and Alpine Research (INSTAAR), the Cooperative Institute for Research in Environmental Sciences (CIRES), the National Center for Atmospheric Research (NCAR), the College of Design and Planning in Boulder, and the Centers for Urban Affairs and Urban Transportation Studies in Denver. A host of other federal, state, and metropolitan agencies in the vicinity offer opportunities to the student.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester plan. Prospective students should have interests coincident with those of the faculty and strong preparation in the physical or social sciences, but not necessarily in geography. In addition to department approval, an applicant for admission as a regular degree student must (1) hold a baccalaureate degree from a college or university of recognized standing for M.A. admission, and a Master's degree for Ph.D. admission, or have comparable preparation to enter graduate study; (2) show promise of ability to pursue satisfactorily advanced study and research, and have at least a 2.75 undergraduate GPA on a 4.0 system. In addition, strong GRE verbal, quantitative, and analytical scores are required.

Financial aid may be available in the form of Teaching and Research Assistantships and University Fellowships. The application deadline for Fellowships is January 15, and for Teaching or Research Assistantships it is February 15.

FACULTY:

University of Colorado at Boulder:

Roger G. Barry, Ph.D., Southampton, 1965, Professor—climatology (synoptic, paleo-climatology), Arctic, snow and ice; Director, World Data Center-A for Glaciology/National Snow & Ice Center; CIRES

T. Nelson Caine, Ph.D., Australian National, 1966, Professor—geomorphology (alpine processes); Associate Director, INSTAAR

Kenneth A. Erickson, Ph.D., UC, Berkeley, 1965, Professor—cultural, cartography, U.S.S.R., conservation

David E. Greenland, Ph.D., Canterbury, 1971, Associate Professor—climatology (micro, applied, and air quality), environmental conservation; INSTAAR

Nicholas Helburn, Ph.D., Wisconsin, 1950, Professor—geographic education, agricultural, natural hazards, recreational

A. David Hill, Ph.D., Chicago, 1964, Professor—cultural, social, geographic education, Latin America

Jack D. Ives, Ph.D., McGill, 1956, Professor—geomorphology, geoecology, Arctic and Alpine environments

Donald W. Jones, Ph.D., Chicago, 1974, Associate Professor—economic, economic development

M. John Loeffler, Ph.D., Washington, 1952, Professor—Colorado, water resources, physical

Hazel A. Morrow-Jones, Ph.D., Ohio State, 1980, Assistant Professor—residential land use, population, regional development

Theodore C. Myers, M.A., History, M.A., Geography, Indiana, 1963, 1964, Assistant Professor—historical, political, Europe, North America

Risa I. Palm, Ph.D., Minnesota, 1972, Professor—urban, social, housing in American cities; natural hazards; IBS

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Albert W. Smith, Ph.D., Washington, 1952, Professor—cartography, map interpretation

Thomas T. Veblen, Ph.D., UC, Berkeley, 1975, Assistant Professor—biogeography, environmental conservation, Latin America

Associated Faculty, University of Colorado at Boulder:

Robert H. Alexander, Professor Adjoint, U.S.G.S., IBS

Spenser W. Havlick, Attendant Rank—Professor, College of Design and Planning, University of Colorado, Boulder

Uwe Radok, Professor Adjoint, CIRES

Harry van Loon, Professor Adjoint, National Center for Atmospheric Research

Gilbert F. White, Distinguished Professor Emeritus, IBS

University of Colorado at Colorado Springs: (Cragmor Road, Colorado Springs, Colorado 80907; 303-593-3478)

Jacquelyn L. Beyer, Ph.D., Chicago, 1957, Professor—resource management, geographic education, Africa, women's studies

Eve C. Gruntfest, Ph.D., Colorado, 1982, Assistant Professor—natural hazards, recreational geography, environmental perception

Thomas P. Huber, Ph.D., Colorado, 1980, Assistant Professor-geomorphology, cartography, remote sensing

Robert P. Larkin, Ph.D., Pennsylvania State, 1973, Professor—population, geographic education, energy resources

University of Colorado at Denver: (1100 14th Street, Denver, Colorado 80202; 303-629-2646)

Yuk Lee, Ph.D., Ohio State, 1970, Professor—mathematical, quantitative, urban retail location, China

C. Gilbert Schmidt, Ph.D., Washington, 1973, Associate Professor—location theory, urban and economic, regional development

Richard E. Stevens, Ph.D., Kansas, 1961, Professor—agricultural, Africa, cartography, air photo

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Bosowski, Elaine F. "The Formation of Cognitive Images of the World: An Analysis of Sketch Maps," 1981.

Carleton, Andrew M. "Cryosphere-Climate Interactions Based on Satellite Data Analysis of Cloud Vortex Systems in the Northern Hemisphere," 1982.

Crane, Robert G. "Synoptic Analysis of Arctic Ice-Atmosphere Interactions Using Satellite Microwave Data," 1981.

Gruntfest, Eve. "Changes in Flood Plain Land Use and Flood Hazard Adjustment in Denver and Boulder, Colorado, 1958-1979," 1982.

Hansen-Bristow, Katherine J. "Environmental Controls Influencing the Altitude and Form of the Forest Alpine Tundra Ecotone, Colorado Front Range," 1981.

McCoy, William D. "Quaternary Aminostratigraphy of the Bonneville and Lahontan Basins, Western U.S., with Paleoclimatic Implications," 1981.

60

Parker, Eugene P. "Cultural Ecology and Change: A *Caboclo Várzea* Community in the Brazilian Amazon," 1981.

Waterman, Stuart. "Investigation of Multispectral Remote Sensing of Snow Cover Using a Solar Radiation Model," 1982.

Master's:

Braun, William C. "Curriculum for a High School Course on the Geography of World Population and Food and Energy Resources," 1982.

Dixon, Jan Bergquist. "Evolution of Tourist-Oriented Land-Use Patterns in Communities Neighboring Cape Hatteras National Seashore, North Carolina," 1981.*

Hillaker, Harry. "Applicability of the Thornthwaite Climatic Water Balance Model to the Texas Coastal Zone," 1982.

Kiladis, George N. "Surface Circulation and Its Relationship to Temperature and Precipitation Anomalies over the Western U.S. during the Period 1899-1974," 1981.

McCord, Barbara Eileen. "Surficial Deposits of the Indian Peaks Region," Colorado Front Range," 1982.

McCracken, Michael Wayne. "Chain Growth and Competitive Strategy: Metropolitan Denver Supermarket Chains, 1950-1980," 1982.

Miller, Douglas R. "A Collection of Landform Fieldtrips in the Colorado Springs Area," 1982.

Moses, Todd A. "Erosional Response of Hillslopes after Forest Fire in the Colorado Front Range," 1982.

Nicholas, Robin. "Parameters of Scarp Form in the Land of Standing Rocks, Canyonlands National Park, Utah," 1981.

Palmer, Peter L. "A Technique for the Determination of Snow Covered Area of Mountain Watersheds," 1981.

Watkins, John F. "The Use of Aerial Photographic Techniques for Estimating Intercensal Urban Populations," 1982.

Columbia University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1916 GRADUATE PROGRAM FOUNDED: 1920

DEGREES OFFERED: M.A., M.Phil., Ph.D.

GRANTED 7/1/81–6/30/82: 7 M.A., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 25 Masters 13 Ph.D.
NOT IN RESIDENCE: 6 Masters 18 Ph.D.

CHAIRMAN: Kempton E. Webb

FOR BULLETIN AND FURTHER INFORMATION WRITE TO: Professor Kempton E. Webb, 1028 International Affairs Building, Columbia University, 420 West 118th Street, New York, New York 10027
Telephone (212) 280–4641

PROGRAMS AND RESEARCH FACILITIES: The Department offers comprehensive and rigorous preparation for research and teaching in geography, with particular strength in the following areas: Economic and Urban Geography, Environmental Studies, Population, Resources, Remote Sensing, and Regional Specialization. The expanding opportunities for geographers in these and other areas make Columbia's resources especially attractive.

The Department is housed in a new building with special class, laboratory, seminar, and student-study facilities for geography. It shares in the resources and facilities of a great university and a great city. The Department has a close relationship with the Goddard Institute for Space Studies and its remote sensing facilities.

Requirements for the M.A. degree consist of eight one-term courses, certification of proficiency in quantitative methods, and the writing of a research paper.

Students preparing for the Ph.D. degree complete four additional terms of course work, fulfill the language requirement, if any, for their area of specialization, pass written and oral qualifying examinations in one major and two minor fields, and write and successfully defend a doctoral dissertation.

Majors offered: Environmental Geography (including Biogeography, Climatology, Conservation, Geomorphology, Hydrology, Oceanography, and Pedology); Social Geography (including Cultural Geography, Economic Geography, Location Theory and Regional Analysis, Medical Geography, Population Geography, and Urban Geography); Resources Geography (including Conservation Theory, Energy, Food Supply, and World Resources); and Regional Geography (including Latin America and the U.S.S.R.).

Minors offered: in any of the above fields and in research methods, such as remote sensing techniques, spatial analysis, or cartography, or in a cognate discipline.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* Emphasis on Ph.D. degree, normally requiring 4 to 7 years. M.A. degree program also available, usually requiring 1 to 2 years. University operates on a semester system. A new part-time M.A. program has been added. *Admission Requirements:* A baccalaureate or master's degree including no less than three years of undergraduate liberal arts courses, of which two courses are in physical geography and two courses in human geography or the equivalent. The Department does not require an undergraduate major in geography. *Financial Aid:* A comprehensive program including fellowships, teaching and research assistantships, and loans.

Society of Woman Geographers Fellowship in Geography: One or more to women geography students; provides tuition, fees, and a stipend.

Fellowship application deadline is January 3.

STAFF:

Stephen R. Baker, M.D., Albert Einstein, 1968, Lecturer—medical geography

Samuel N. Goward, Ph.D., Indiana State, 1978, Lecturer—remote sensing, environmental systems

Robert A. Lewis, Ph.D., Washington, 1964, Professor—U.S.S.R., population

Sara L. McLafferty, Ph.D., Iowa, 1979, Assistant Professor—economic, public policy

Miklos Pinther, B.S., Columbia, 1967, Lecturer—cartography

Garry F. Rogers, Ph.D., Utah, 1980, Assistant Professor—plant ecology, physical geography

Theodore Shabad, Ph.D., Columbia, 1976, Lecturer—resources of the U.S.S.R.

Neil Smith, Ph.D., Johns Hopkins, 1982, Assistant Professor—urban, social, quantitative

Kempton E. Webb, Ph.D., Syracuse, 1958, Professor—Latin America, cultural, food supply, resources

Warren E. Yasso, Ph.D., Columbia, 1964, Associate Professor—geomorphology, oceanography

Leonard Zobler, Ph.D., Columbia, 1953, Professor—resource use, soils, hydrology, conservation theory, land use

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Braman, Stuart Davidson. "Collective Response to Flood Hazard: a Comparative Study of Communities in the Saw Mill River Watershed, Westchester County, New York," 1981.

Davenport, John Charles. "The Impact of Economic Sanctions Against South Africa on the Strategic Mineral Position of the United States: The Cases of Antimony and Manganese," 1982.

Master's:

Barbosa, Vania Cerqueira. "Analysis of the Processes of Urbanization and Urban Growth in Brazil in the 1940-1970 Period," 1981.

Bartels, Frederick W. "Core Resettlement: An Explanation by Using Some Existing Residential Location Theories," 1982.

Beletsis, Cleo. "The Coal Industry of the USSR," 1982.

Davidoff, Barbara Jeanne. "Visitor Attitudes and Perceptions: Sawtooth National Recreation Area, Idaho," 1982.

Ellins, Katherine Kelly. "Description of a Project Designed to Assess the Impact of Sewage Pollution from Hotels on Jamaican Coves," 1982.

Hearn, Peter Brian. "A Quantitative Analysis of Farmland Loss in New Jersey with Implications for Public and Private Farmland Preservation Efforts in the Metropolitan New York Region," 1982.

Miller, Michael S. "Evaluating Seasonal Trends in Surface Albedo with Satellite Data and a Simple Atmospheric Model," 1982.

University of Delaware

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1971

DEGREES OFFERED: M.A., M.S.; Ph.D. (Applied Sciences-Climatology)

GRANTED 7/1/81–6/30/82: 3 Master's

GRADUATE STUDENTS IN RESIDENCE: 18 Masters 1 Ph.D.
NOT IN RESIDENCE: 6 Masters

CHAIR: John R. Mather

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. John R. Mather, Chair, Department of Geography, University of Delaware, Newark, Delaware 19711
Telephone (302) 738-2294

PROGRAMS AND RESEARCH FACILITIES: The Graduate Program provides the opportunity for Masters and Doctoral students to interact frequently with a staff whose interests touch upon one of three particular themes—climatology, cartography, and urban landscapes. The climatology program emphasizes energy and water budgets and their application to environmental problems. The faculty's research interests include climatic modelling, human impact upon energy and moisture exchanges, climatic influences on socio-economic activity, and applied studies in agriculture, biogeography, and micro-climatology. The cartography program emphasizes landform mapping, map symbol perception, and computer-assisted production and design. The urban program focuses on historic development, spatial organization, and human behavior in urban landscapes, as well as cultural attitudes and philosophies of urban civilization. Interdisciplinary work with other departments and the Colleges of Agricultural Sciences and Marine Studies is encouraged. A University Center for Climatic Research has been established in the Department, which also houses the Office of the State Climatologist for Delaware. Facilities include instruments for microclimatic investigations and the extensive library holdings of the C. W. Thornthwaite Laboratory of Climatology. Computer facilities are primarily supported by a Burroughs B7700 system with advanced graphics capabilities, and users also have access to PDP 11/70 and DEC 10 systems. The Department has a Tektronix graphics terminal with hard-copy capability, a dedicated digitizing tablet, and an IBM microcomputer with high-resolution color graphics, as well as three data terminals that connect to all campus computers. A complete graphics reproduction facility is also available in the department. An interdisciplinary Ph.D. program in Applied Sciences-Climatology, which emphasizes the understanding, development, and use of analytical, numerical, and/or statistical analogues to climate and climatic processes, is also administered by the Department. *Publications in Climatology* are jointly published by the Center for Climatic Research and the Thornthwaite Laboratory of Climatology.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on a semester system. General admissions requirements are an undergraduate index of 2.5 or more and combined GRE scores of at least 1050; the Department will consider qualified applicants without previous background in geography, though additional preliminary work may be required. Financial aid is available through research assistantships to highly qualified applicants.

STAFF:

Edmunds V. Bunkse, Ph.D., UC, Berkeley, 1973, Associate Professor—cultural-historical, landscape aesthetics, urban, U.S.

Richard T. Field, M.S., Chicago, 1962, Lecturer—micro-climatology, energy budgeting in human and natural systems, ecology

Franklin E. Gossette, Ph.D., UCLA, 1980, Assistant Professor—urban, social, computer cartography, China

Laurence S. Kalkstein, Ph.D., Louisiana State, 1974, Associate Professor—biogeography, conservation, ecological problems, climatology

Vytautas Klemas, Ph.D., Technical University, Braunschweig, 1965, Professor (joint appointment with Marine Studies)—remote sensing, environmental monitoring, coastal resource management

John R. Mather, Ph.D., Johns Hopkins, 1951, Professor and Chairman, Director, Center for Climatic Research—applied climatology, meteorology, water resources

Thomas C. Meierding, Ph.D., Colorado, 1977, Assistant Professor—climatic geomorphology, cartography, air photo interpretation

Peter W. Rees, Ph.D., UC, Berkeley, 1971, Associate Professor and Associate Dean, College of Arts and Science—urban, historical-economic, Latin America

Roger S. Ulrich, Ph.D., Michigan, 1973, Associate Professor—behavioral, urban, visual landscapes, economic

Cort J. Willmott, Ph.D., UCLA, 1977, Associate Professor (joint appointment with Marine Studies)—climatology, quantitative methods

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

DeNardo, Anthony. "Cloud Seeding Frequencies and Corn and Soybean Water Stress Periods in Delaware," 1981.

Lowry, Sandra. "Uniformity and Individuality Expressed in the Suburban Residential Landscapes of Northern New Castle County, Delaware," 1981.

Rowe, Clinton. "Simulation of Shortwave Irradiance on Flat-Plate Solar Collectors in Urban Environments," 1982.

University of Denver

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1945 GRADUATE PROGRAM FOUNDED: 1947

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81–6/30/82: 2 M.A., 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 9 M.A. 1 Ph.D.
NOT IN RESIDENCE: 3 M.A. 2 Ph.D.

CHAIRPERSON: Laurance C. Herold

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Laurance C. Herold, Chairman, Department of Geography, University of Denver, Denver, Colorado 80208
Telephone (303) 753-2513

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography at the University of Denver offers graduate work in the following areas of concentration: geomorphology, urban and regional studies, and environmental studies. In each of these areas, stress is placed on interdisciplinary studies; the Department enjoys close working relations with other departments within the University. Cooperative programs of work-study can be arranged occasionally with local planning agencies, and there is opportunity for cooperative research in physical geography with locally based federal agencies.

The Department is housed in a group of offices, classrooms, and special purpose rooms in Pioneer Hall. Library and map resources include those of the Department, the University, and the Denver metropolitan area. The Department has a microcomputer with color graphic capability and a Numonics digitizer. Field work and in-service experiences are encouraged.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Denver operates on a quarter system.

Candidates for graduate degrees in the Department of Geography are required to take the Graduate Record Examination as part of their admission requirements. Among the criteria applied in determining eligibility for admission are an acceptable undergraduate scholastic record, satisfactory scores on the Aptitude Test for the Graduate Record Examination, and appropriate references.

Application for the admission to graduate study is advisable at least two quarters prior to the expected date of enrollment.

A limited number of University teaching and research assistantships as well as tuition scholarships are available. Assistantships carry a stipend with remission of tuition.

STAFF:

Joseph P. Beaton, Ph.D., UCLA, 1981, Assistant Professor—urban and economic geography

John E. Costa, Ph.D., Johns Hopkins, 1973, Associate Professor—fluvial geomorphology, environmental geology

Richard F. Hadley, M.A., Minnesota, 1950, Adjunct Professor—geomorphology, erosion and sedimentation, hydrology

Laurance C. Herold, Ph.D., Southampton, 1968, Associate Professor and Chairman—systematic specialization, cultural, regional, British Isles, American Southwest and Northern Mexico

David B. Longbrake, Ph.D., Iowa, 1972, Associate Professor—urban, urban and regional planning, land use and development, quantitative methods

Robert D. Rudd, Ph.D., Northwestern, 1953, Professor—physical, remote sensing, climatology

Terrence J. Toy, Ph.D., Denver, 1973, Associate Professor—climatic geomorphology, quantitative, hydrology

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Hoadley, Jeanne L. "A Statistical Analysis of Several Factors Influencing Per Capita Consumption," 1981.

East Carolina University

DEPARTMENT OF GEOGRAPHY AND PLANNING

DATE FOUNDED: 1930 GRADUATE PROGRAM FOUNDED: 1964

DEGREES OFFERED: M.A., M.A.Ed.

GRANTED 7/1/81-6/30/82: 2

GRADUATE STUDENTS IN RESIDENCE: 7
NOT IN RESIDENCE: 3

CHAIRMAN: Ennis L. Chestang

FOR CATALOG AND FURTHER INFORMATION WRITE TO: The Graduate Advisor, Department of Geography and Planning, East Carolina University, Greenville, North Carolina 27834
Telephone (919) 757-6230

PROGRAMS AND RESEARCH FACILITIES: The Department offers two Masters degrees, the M.A. and the M.A.Ed. There are thesis and non-thesis programs for both degrees.

The Departmental map library is a depository for U.S.G.S., Defense Mapping Agency, National Ocean Survey, and, on temporary basis, Aeronautical Charts. There is a sizeable air photo collection which concentrates on North Carolina and the other Southeastern States. Separate laboratories for physical geography, air photo interpretation, quantitative methods, and cartography are available. The Institute for Coastal and Marine Resources, in which the Department participates, offers additional support, facilities, and courses for graduate students.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:
The graduate program is open to students with either an undergraduate major in geography or satisfactory course work in the field. Students with limited backgrounds in geography may be accepted under certain conditions. Requirements for admission are set forth in the Graduate Bulletin, which is available from the Graduate School.

Assistantships are available to qualified students. The stipend is normally $2950 per academic year. A limited number of Special Talent assistantships to aid in defraying out-of-state tuition are available. They are awarded by invitation. A prospective Special Talent student should have a transcript and two letters of recommendation sent to the Graduate Advisor. This will permit a determination to be made whether to invite the student to apply for a Special Talent Assistantship.

STAFF:

Simon Baker, Associate Professor, B.S., M.S. Arizona, Ph.D. Clark
Ennis L. Chestang, Professor and Chairperson, B.S., M.S. Florida State, Ph.D. Indiana
Robert E. Cramer, Professor, A.B. Ohio, M.S., Ph.D. Chicago
William W. Hankins, Associate Professor, A.B., M.S. (Planning), M.S. (Geography) Florida State
Edward P. Leahy, Professor, B.M.E. Virginia, M.B.A. Columbia, Ph.D. Florida
Palmyra Leahy, Assistant Professor, A.B., Licenciado, Minas Gerais (Brazil)
Janet H. Petterson, Assistant Professor, A.B. Mount Holyoke, M.A. Ohio State, Ph.D. Florida
Philip Shea, Assistant Professor, B.A. Middlebury, M.A., Ph.D. Michigan State
Richard A. Stephenson, Professor, B.A. Kent State, M.S. Tennessee, Ph.D. Iowa
Douglas C. Wilms, Professor, B.A., M.A. Missouri, Ph.D. Georgia
Mulatu Wubneh, Assistant Professor, A.B. Haille Selassie, M.A., Ph.D. (Planning) Florida State
Charles Ziehr, Assistant Professor, B.A. Arkansas, M.S. South Carolina, Ph.D., Indiana

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Phillips, Jonathan David. "Salinity in Pamlico Sound, North Carolina: A Space-Time Approach," 1982.

East Tennessee State University

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

DATE FOUNDED: 1951 GRADUATE PROGRAM FOUNDED: 1960

DEGREES OFFERED: M.A.

GRANTED 7/1/81–6/30/82: 5

GRADUATE STUDENTS IN RESIDENCE: 21
NOT IN RESIDENCE: 0

CHAIRPERSON: Donald H. Poole

FOR CATALOG AND FURTHER INFORMATION WRITE TO: The Graduate Committee, Department of Geography and Geology, East Tennessee State University, Johnson City, Tennessee 37601
Telephone (615) 929–4360

PROGRAMS AND RESEARCH FACILITIES: The department offers a major concentration in the following areas: Urban and Region Planning, Physical Geography, and In-Service Teacher Training.

A well-equipped cartographic and air photo-remote sensing laboratory is present in a Departmental Research Annex. A map depository is housed in the University library. In addition, the library subscribes to many hundreds of periodicals in geography and in supporting fields.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The Department of Geography offers graduate programs leading to the Master of Arts degree. Three types of programs in geography may be followed: a professional program emphasizing Urban and Regional Planning, a professional program in Physical Geography, and a regional specialization for persons seeking training for teaching in the elementary and secondary school systems.

Students determine their own curriculum, depending on interests, with the help of the advising committee; however, the following four graduate courses are required of all students: Field Methods, Quantitative Techniques, Evolution of Geographic Thought, and Research in Geography.

The Department of Geography urges its graduate students to participate in the cooperative educational experience at East Tennessee State University. By doing so the student not only can work but can gain valuable experience in his desired field of expertise.

Minimum degree requirements for the M.A. are: 1) 32 semester hours of geography which includes 3 papers of a directed research nature, 2) 27 semester hours of geography plus a thesis (3 semester hours), 3) A minimum of 21 semester hours of geography following a thesis or non-thesis option and 9 semester hours in a chosen minor field.

University teaching and research assistantships are available. Selection for admission and financial assistance will be based on the applicant's academic record, letters of recommendation, GRE scores, and a statement concerning professional goals.

STAFF:

Clifton C. Carpenter, M.A., Kentucky, 1958, Associate Professor—geomorphology, political, Soviet Union

George A. Finchum, Ed.D., Tennessee, Professor—teaching of geography

Charles Gunter, M.A., Tennessee, 1963, Assistant Professor—historical, cultural geography, United States, geography of Southern Appalachia

Michael P. Marchioni, Ph.D., Cincinnati, 1971, Associate Professor—urban geography and planning, location theory, history and philosophy of geography

Robert W. Peplies, Ph.D., Georgia, 1968, Professor—remote sensing, soils, settlement, Europe, history and philosophy of geography

Donald H. Poole, Ph.D., Georgia, 1969, Professor and Chairman—physical, geomorphology, climatology, photo interpretation, North America, Southern Appalachians

Chester T. Stout, M.A., East Tennessee State, 1962, Associate Professor—historical and agricultural geography, economic, Africa, United States

Robert L. Wyatt, M.A., East Tennessee State, 1964, Assistant Professor—agricultural economic geography, South Africa, conservation of natural resources

Eastern Michigan University

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

DATE FOUNDED: 1903 GRADUATE PROGRAM FOUNDED: 1927

DEGREES OFFERED: M.A., M.S.

GRANTED 7/1/81–6/30/82: 8

GRADUATE STUDENTS IN RESIDENCE: 42

HEAD: Elwood J. C. Kureth

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Robert Ward, Department of Geography and Geology, or Dr. Marshall McLennan, Historic Preservation Planning, Eastern Michigan University, Ypsilanti, Michigan 48197 Telephone (313) 487-3140 or 487-0232

PROGRAMS AND RESEARCH FACILITIES: *GEOGRAPHY*. The Department of Geography and Geology offers courses leading to the degrees of Master of Arts and Master of Science. Students who complete programs emphasizing man and his works receive the degree of Master of Arts; those whose programs stress physical geography, land use analysis and other aspects of environmental studies receive the

Master of Science degree. The department also offers a Master of Science in historic preservation with concentrations in historic preservation planning and historic administration.

The department awards 9 1/2 graduate assistantships each year. A graduate assistantship stipend ranges from $3,150-$3,350. In addition, the University pays full tuition for 16 credit hours for each fiscal year of the assistantship, as well as registration and health service fees. The total package approximates $4,800, depending whether you are a resident or nonresident of Michigan.

Degree Requirements. The Master's degree in geography may be completed by choosing Option One (30 semester hours), Option Two (30 semester hours), or Option Three (30 semester hours). The differences between these options are discussed below.

Option One: Students whose life/career goals include research activity may elect to complete a thesis (representing six semester hours credit). The thesis topic and design are developed by the Master's candidate with the advice of a departmental graduate faculty member. The completion of a thesis is especially recommended as a valid learning experience for those who intend to pursue further advanced degrees, but is also useful for those who seek employment with organizations that perform research functions.

Option One requires the completion of 30 semester hours broken down as follows: 18–24 hours in geography, 0–6 hours in approved cognates, and the remaining 6 hours in thesis credit.

Option Two: This option is designed to serve individuals who may prefer additional course work and/or work experience as a substitute for thesis research and would benefit from an off campus internship experience. It also offers scope to in-service individuals (e.g., planners, soil scientists, and others) to reorganize and apply the subject matter of their work experience to an E.M.U. course under the supervision of a departmental graduate faculty member who evaluates the student's performance. Either of these supervised experiences may be accomplished by enrolling in GEO 687 or GEO 688 or GEO 689, with approval of the graduate coordinator.

Of the 30 hour total a maximum of six hours may be taken as cognate hours outside the department. A requirement of this option is the successful completion, while in residence at E.M.U., of two hours achieved through the composition of a paper of publishable quality. Graduate faculty in the department must be consulted in the initiation, design, and completion of the paper.

Option Three: This option is designed to enhance the career of practicing or prospective elementary and secondary teachers. Students may elect to develop their teaching units under the supervision of three different faculty members. Each unit, worth two credit hours, shall be taken under the catalog number GEO 698.

HISTORIC PRESERVATION PROGRAM. The Department of Geography administers an interdepartmental program in historic preservation. The program includes a 36 hour Master of Science curriculm in historic preservation, and, as a Special Student, a five-course curriculum granting a certification of completion and satisfactory academic performance. Students in the Master's program may elect to pursue a general curriculum in historic preservation or to take their degrees in historic preservation with a concentration in either historic planning, historic administration, or heritage interpretation. This choice must be formally declared to the program coordinator by the time the student has completed 20 hours of graduate work in historic preservation.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* Tri-semester. *Admission Requirements:* Undergraduate Grade Average of B or better. *Financial Aid:* Departmental graduate assistants and teaching fellows ($3150 to $3350).

STAFF:

Allen Cichanski, Ph.D. candidate, Ohio State, Assistant Professor—mineralogy, petrology, earth science education

E. Lorene Hall, M.S., Eastern Michigan, 1960, Associate Professor—Michigan, the American Midwest, geographic education

George M. Howe, Ph.D., Clark, 1956, Professor—weather and climate

Eugene Jaworski, Ph.D., Louisiana State, 1971, Professor—geomorphology, soils, cartography, remote sensing

Elwood J. C. Kureth, Ph.D., Michigan, 1971, Professor—world regions, location analysis, Anglo-America

Horace A. MacMahan, Jr., Ed. D., Colorado, 1967, Professor—earth science, methods

Robert B. Mancell, Ph.D., Michigan, 1974, Associate Professor—economic, urban, Latin America, neighborhood preservation

James R. McDonald, Ph.D., Illinois, 1964, Professor—human migrations, geographic thought, Europe

Marshall S. McLennan, Ph.D., UC, Berkeley, 1973, Associate Professor—cultural, historic preservation, settlement, folk architecture

Andrew A. Nazzaro, Ph.D., Michigan State, 1974, Associate Professor—cultural, Africa, medical, rural development, historic preservation

Lawrence Ogden, D.Sc., Colorado School of Mines, 1958, Professor—earth science education, economic geology

Carl F. Ojala, Ph.D., Georgia, 1972, Professor—economic, cultural, North America

Ross N. Pearson, Ph.D., Michigan, 1954, Professor—geographic education, Latin America

C. Nicholas Raphael, Ph.D., Louisiana State, 1968, Professor—geomorphology, coastal zones

Ranjit Tirtha, Ph.D., North Carolina, 1961, Professor—world regions, population, Asia, urban planning

Daniel S. Turner, Ph.D., Wisconsin, 1948, Professor—economic geology, earth science, stratigraphy, glacial geology

Robert M. Ward, Ph.D., Michigan, 1971, Professor—cartography, natural environmental hazards, land use, rural planning/preservation

Florida Atlantic University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1964 GRADUATE PROGRAM FOUNDED: 1972

DEGREES OFFERED: M.A. (cooperative Ph.D. with University of Florida and Florida State)

GRANTED 7/1/81-6/30/82: 2

GRADUATE STUDENTS IN RESIDENCE: 9
NOT IN RESIDENCE: 6

CHAIRPERSON: Ronald Schultz

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Alan Craig, Graduate Advisor, Department of Geography, Florida Atlantic University, Boca Raton, Florida 33431
Telephone (305) 393-3250

PROGRAMS AND RESEARCH FACILITIES: Florida Atlantic University is an upper division and graduate university in the state system, offering advanced training at the junior, senior, master's, and doctorate levels. The facilities available to geographers include fully-equipped cartography and remote sensing interpretation laboratories containing NASA and other imagery and more than 23,000 maps; a quantitative techniques laboratory; complete computer facilities with printer and plotter output; a darkroom; and an 800,000 item library.

Departmental strengths are in the following areas: urban studies, planning, Latin America, biogeography, remote sensing, and environmental perception. Strong programs in other physical and social science departments provide for cognate and inter-departmental work.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: A GRE score of 1000 and an upper division GPA of B are required for admission. Out-of-state tuition waivers are available. M.A. requirements: 30 credits (12 of which are geography seminars); preliminary oral examination; thesis. Any geography, foreign language, or statistics deficiencies are additional to the 30 credit minimum.

STAFF:

Alan Craig, Ph.D., Louisiana State, 1966, Professor—Latin America, biogeography, Florida

James Latham, Ph.D., Pennsylvania, 1959, Professor—remote sensing, urban, planning, Anglo-America

David Lee, Ph.D., UCLA, 1967, Associate Professor—Africa, cultural, cartography, geography of women

J. Warren Nystrom, Ph.D., Clark, 1942, Adjunct Professor—political, economic, Europe, Latin America

Ronald Schultz, Ph.D., Washington, 1971, Associate Professor—economic, urban, quantitative

Robert Tata, Ph.D., Syracuse, 1968, Professor—economic development methodology, Latin America

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Bernstein, Arla. "Visual Resource Assessment: Comparison of Two Approaches," 1982.

Gellis, Andrew. "An Analysis of the Geography of Sex-Ratio in the United States," 1981.

Florida State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1929 GRADUATE PROGRAM FOUNDED: 1930

DEGREES OFFERED: M.S., M.A. (Cooperative Ph.D. with University of Florida)

GRANTED 7/1/81-6/30/82: 1

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 7

CHAIRMAN: Patrick O'Sullivan

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Coordinator, Department of Geography, The Florida State University, Tallahassee, Florida 32306
Telephone (904) 644-1706

PROGRAMS AND RESEARCH FACILITIES: The requirements for a Master's degree in Geography can be met by completing either (1) a thesis and 30 semester hours or (2) a research report and 32 semester hours or (3) an interdepartmental program for junior and community college instructors. Whichever mode is selected, one of five substantive curricular tracks can be followed: land use analysis, natural resource and environmental management, rural settlement and agriculture, cities and regional systems, transport. The Department cooperates with the University of Florida in offering a Ph.D. program (participation requires prior admission into the University of Florida Ph.D. program in Geography).

The University has a rich variety of support courses and the library houses a good collection of maps, atlases and data sources. The Department's research facilities include a cartography laboratory. Computing time is available on the University's CDC Cyber 73. Proximity to state and regional agencies in Florida's capital city is advantageous for graduate research. The Florida Resources and Environmental Analysis Center (housed within the Department of Geography) provides opportunities for funded research for both graduate students and faculty.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Florida State University operates on a semester system. An undergraduate major in geography is not required for admission to the Geography program; rather, students with majors in other disciplines are encouraged to apply with the understanding that minimal deficiencies must normally be rectified for completion of the program. Applicants must submit evidence of strong academic performance in their undergraduate work and must have taken the general aptitude test of the Graduate Record Examination. Undergraduate training in mathematics, statistics, or computer science is desirable. University Fellowships at a stipend of $3,600 for two semesters are available as are Department of Geography Graduate Assistantships at $3,200-$4,800 for two semesters. Both may carry a waiver of out-of-state fees. Other financial aid is available in the form of Research Assistantships and hourly wage employment in research projects through the Florida Resources and Environmental Analysis Center.

GRADUATE FACULTY:

Earl J. Baker, Ph.D., Colorado, 1974, Associate Professor—behavioral analysis, perception of natural hazards

William R. Brueckheimer, Ph.D., Michigan, 1954, Professor—conservation, resource problems, political, recreation

Edward A. Fernald, Ph.D., Michigan State, 1968, Professor—geographic education, land and resource use, Florida

Janet E. Kodras, Ph.D., Ohio State, 1982, Assistant Professor—population, development, policy

Harold McConnell, Ph.D., Iowa, 1964, Professor—quantitative methods, geomorphology

Patrick O'Sullivan, Ph.D., London School of Economics, 1967, Professor—transport, economic, political

Donald J. Patton, Ph.D., Harvard, 1949, Professor—resources, environmental perception, economic, Anglo-America

Burke G. Vanderhill, Ph.D., Michigan, 1956, Professor—settlement, historical landforms, Canada, United States, Europe

Morton D. Winsberg, Ph.D., Florida, 1958, Professor—geographic thought, agricultural, research methods, computer graphics, Latin America

Richard E. Zeller, Ph.D., Ohio State, 1978, Assistant Professor—urban, economic marketing

University of Florida

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1941 GRADUATE PROGRAM FOUNDED: 1947

DEGREES OFFERED: M.A., M.S., M.A.T., M.S.T., Ph.D.

GRANTED 7/1/81–6/30/82: 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 16 Masters, 9 Ph.D.
NOT IN RESIDENCE: 2 Masters, 3 Ph.D.

CHAIR: Stephen M. Golant

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Cesar N. Caviedes, Graduate Coordinator, Department of Geography, University of Florida, Gainesville, Florida 32611
Telephone (904) 392-0494

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts degree may be taken with emphasis on economic, social, or cultural geography, or the student may elect a Master of Science degree with emphasis on physical geography or environmental studies. The Master's degree is required for entry to the Ph.D.

The Master of Arts and Master of Science in Teaching degrees may be earned in geography. These non-thesis degrees are designed for persons who intend to teach in community colleges or to go into planning.

The Doctor of Philosophy degree is offered with specialization in economic, social, or cultural geography, environmental studies, the geography of resource-use, agricultural geography, and urban geography and with regional specialization in Southeastern United States, especially Florida; Latin America, and Africa, South of the Sahara. This degree program operates cooperatively with Florida State and Florida Atlantic Universities. Under the program students may take work on any campus.

Of many university-wide facilities, the following deserve special mention: the Centers for Latin American and African Studies; the University Library with its large map and Latin American collection; the Hume Agricultural Library, which is one of the best such libraries in the South; the Latin American Data Bank; the Computing Center; the Urban and Regional Studies Center; the Water Resources Research Center; and participation in the Organization for Tropical Studies (OTS).

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Florida operates on the semester system. Admission to the Graduate School requires (1) presentation of a baccalaureate degree from an accredited college, (2) a B average or its equivalent in prior junior or senior level undergraduate work, (3) a minimum combined score of 1,000 on the aptitude test of the Graduate Record Examination (GRE). Three letters of recommendation are required by the Department.

Applications for admission to the University and the Graduate School must be made not later than ten weeks before the proposed date of entry. The necessary information and forms, including requests for housing, may be obtained from the Office of Admissions, University of Florida. Applicants may at the same time request a copy of the Graduate School Catalog. Foreign students should direct their requests to the Adviser to Foreign Students.

The University offers graduate fellowships and assistantships ranging from $3900 to $5850 for nine months; waivers of out-of-state fees may be arranged. NDEA Title VI Fellowships may be available for students interested in Latin American Studies and in African Studies.

The Department of Geography also offers one-third time assistantships which provide a stipend of $4500 for nine months; waivers of out-of-state fees may be arranged. Service generally consists of teaching and infrequently research duties.

Applications for fellowships and assistantships should be received before February 1.

STAFF:

Gustavo A. Antonini, Ph.D., Columbia, 1968, Professor—Caribbean, tropical resource utilization, geomorphology

HelenJane Armstrong, Ph.D., Oregon State, 1977, University Librarian—map use and interpretation, geographical bibliography

Cesar N. Caviedes, D.Sc., Freiburg, 1969, Professor—social, South America, environmental systems

John R. Dunkle, Ph.D., Clark, 1955, Professor—cartography, political

Kay M. Eoff, Ph.D., Florida, 1962, Assistant Professor—conservation, energy resources, astronomy

Stephen M. Golant, Ph.D., Washington; 1972, Associate Professor and Chair—social, behavioral, social gerontology

James A. Henry, Ph.D., Kansas, 1978, Assistant Professor—climatology, physical, remote sensing

Ary J. Lamme III, Ph.D., Syracuse, 1969, Associate Professor—historical, Anglo-America, geographic thought

Robert B. Marcus, Ed.D., Florida, 1956, Professor—Florida, physical, resource use, tourism

David L. Niddrie, Ph.D., Manchester, 1965, Professor—Southern Africa, Caribbean, agricultural, land use

Carl N. Olsson, Ph.D., Florida, 1970, Associate Professor—climatology, energy resources, astronomy

Louis A. Paganini, Ph.D., Florida, 1970, Associate Professor—Latin America, cultural, physical, biogeography

Earl C. Pirkle, Ph.D., Cincinnati, 1956, Professor—mineral resources, geomorphology

Hugh L. Popenoe, Ph.D., Florida, 1960, Professor and Director of International Programs—tropical land use, tropical ecology

Leonidas H. Roberts, Ph.D., Florida, 1958, Professor—physical, astronomy

Nigel Smith, Ph.D., UC, Berkeley, 1976, Associate Professor—conservation, human ecology, Third World development, medical

Carl W. Spurlock, Ph.D., Oklahoma, 1972, Associate Professor—economic, land use and resource analysis, geographic information systems

Paul R. Stayert, M.A., Florida, 1980, Cartographer—graphic arts, photography/map reproduction

Two additional faculty to be added.

PROFESSORS EMERITI:

Raymond E. Crist, Ph.D., Grenoble, 1937, Research Professor Emeritus—Caribbean, Andean America, Mediterranean basin, land tenure use

Clark I. Cross, Ph.D., Washington, 1951, Professor—physical, resource use, air photo interpretation, U.S.S.R.

Shannon McCune, Ph.D., Clark, 1939, Professor Emeritus—eastern Asia, economic, political

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Marti, Bruce E. "Maritime Containerized Export Flows: South Atlantic and Gulf Ports, 1974-76," 1982. Mf., University Microfilms.

Swisher, Marilyn E. "An Investigation of the Potential for the Use of Organic Fertilizers on Small Mixed Farms of Costa Rica," 1982. Mf., University Microfilms.

Tupper, Howard M. "Urban Morphological Theory and Spatial Differentiation in a Caribbean City: Residential Land Use from 1948 to 1975 in Santo Domingo, The Dominican Republic," 1982. Mf., University Microfilms.

George Mason University

DEPARTMENT OF PUBLIC AFFAIRS

DATE FOUNDED: 1972 GRADUATE PROGRAM FOUNDED: 1978

DEGREES OFFERED: M.S. in Geographic and Cartographic Sciences

GRANTED 7/1/81-6/30/82: 0

GRADUATE STUDENTS IN RESIDENCE: 0
NOT IN RESIDENCE: 47

CHAIRPERSON: Dr. Robert P. Clark

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Admissions Office, George Mason University, Fairfax, Virginia 22030
Telephone (703) 323-2104

PROGRAMS AND RESEARCH FACILITIES: The M.S. Degree is organized around two tracks: Cartography and Applied Geography. Cartography students may choose the Topographic or Thematic Specializations.

The Geography Program attempts to utilize the vast cartographic and geographic resources of the Washington, D.C. area through the hiring of adjunct faculty who are specialists in their field, and by allowing students access to state-of-art cartography at off-campus locations. On campus facilities include laboratories for computer graphics, cartographic reproduction, photo interpretation, and photogrammetry. The Geography Program publishes the *Virginia Geographer*, the official semiannual journal of the Virginia Geographical Society. For further information write to Geography Program Director, Department of Public Affairs, George Mason University, Fairfax, Virginia 22030, or telephone (703) 323-2272.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Most graduate courses are offered evenings. Many students are employed full or part-time in geography related jobs.

Applicants should have a bachelor's degree in geography or cartography or equivalent with a grade point average of 3.0 (on a 4.0 scale) in their last two years of undergraduate work. Other applicants may be considered for provisional or non-degree status.

Various scholarships and loans are available through the Financial Aid Office (703) 323-2176. Assistantships are available through the Department of Public Affairs.

STAFF:

Alice C. Andrews, Ed.D., George Washington, 1975, Associate Professor—cultural, population, Soviet Union

Jean-Claude Boswell-Thomas, Ph.D., University of Aix-Marseille, 1967, Associate Professor—economic, remote sensing, Europe and Mediterranean, urban

Carleton W. Cox, Ph.D., Wisconsin-Madison, 1977, Assistant Professor—thematic and computer cartography, aerial photography and photogrammetry

James W. Fonseca, Ph.D., Clark, 1974, Associate Professor— political, Latin America, Anglo-America

Robert S. Hayden, Ph.D., Georgia, 1979, Assistant Professor—geomorphology, conservation, field methods, meteorology and climatology

George Washington University

DEPARTMENT OF GEOGRAPHY AND REGIONAL SCIENCE

DATE FOUNDED: 1945 GRADUATE PROGRAM FOUNDED: 1949

DEGREES OFFERED: M.A., M.A. Ed.

GRANTED 7/1/81-6/30/82: 3

GRADUATE STUDENTS IN RESIDENCE: 10
NOT IN RESIDENCE: 1

CHAIRMAN: Eldor Pederson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Eldor Pederson, Chairman, Department of Geography, George Washington University, Washington, D.C. 20052
Telephone (202) 676–6185

PROGRAMS AND RESEARCH FACILITIES: Located in newly remodeled quarters four blocks from the White House, the Department of Geography and Regional Science of the George Washington University is within walking distance of the Departments of State and Interior, the World Bank, and the Organization of American States, and it is a short subway ride from the Library of Congress and the many other major research facilities of Washington, D.C. This access combines with excellent facilities and diverse programs on campus (including the Environmental Studies and Latin American Studies programs managed by the department, and the Geobiology and Sino-Soviet programs in which it participates) to provide unparalleled opportunities for the study of geography. The department has designed its offerings to make use of these resources while providing the student with a strong background in the major fields of geography.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:
Academic Plan: The course of study leading to the degree of Master of Arts consists of 30 semester hours with thesis and 36 semester hours without thesis. Each student may select a program of studies from one of the following: resources and the physical environment; population and resources; transportation and urbanization; and regional development. Additionally, students must show a proficiency in an approved foreign language, statistics, or computer programming.

STAFF:
Judith Banister, Ph.D., Stanford, Lecturer—China
Marvin Gordon, Ph.D., Columbia, Professor—agriculture, Latin America
David Kamerling, Ph.D., Syracuse, Lecturer—U.S.S.R.
John Lowe, Ph.D., Clark, Professor—urban, transportation
Edward Marasciulo, B.A., Miami, Lecturer—Latin America
Shelley Mastran, M.A., George Washington, Lecturer—cultural
Eldor Pederson, Ph.D., UC, Berkeley, Associate Professor—urban, political
Jerome Pickard, Ph.D., Syracuse, Research Professor—regional development
David Selden, M.A., Wisconsin, Lecturer—cartography
Arthur Viterito, Ph.D., Denver, Assistant Professor—climatology, remote sensing
Faculty member to be appointed—resource management, environmental studies

AFFILIATED STAFF:
Michael J. Enders, Ph.D., Clark, Assistant Professor (Urban and Regional Planning)—urban planning, environmental resources management
John Sibert, Ph.D., Michigan, Associate Research Professor (Electrical Engineering and Computer Science)—computer graphics, cartography

TITLES OF THESES COMPLETED 7/1/81–6/30/82:
Master's:

Birtles, Suzanne M. "Social Networks and Their Use in the Study of Locational Conflict Situations. A Case Study: National Airport," 1982.*

Georgia State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1967 GRADUATE PROGRAM FOUNDED: 1971

DEGREES OFFERED: M.A., M.A.T.

GRANTED 7/1/81–6/30/82: 0

GRADUATE STUDENTS IN RESIDENCE: 10
NOT IN RESIDENCE: 6

CHAIRMAN: Truman A. Hartshorn

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Malcolm A. Murray, Director of Graduate Studies, Department of Geography, Georgia State University, University Plaza, Atlanta, Georgia 30303
Telephone (404)658-3232

PROGRAMS AND RESEARCH FACILITIES: The department specializes in two areas of study: Cartography, and Urban Geography, but also offers program training in Population, Cultural Heritage, Energy/Resource Management, and Regional Geography. Students may select any one of these areas of specialty. Further information about the department and its program is found in the booklet, *Graduate Programs in Geography at Georgia State University*. This booklet can be obtained from the department without charge.

Georgia State University is a major commuter institution with an enrollment of 20,000 students, graduate and undergraduate, located in downtown Atlanta. It has the largest graduate enrollment among universities in the Southeast. The university is near excellent public transportation service, including a stop on the new MARTA rapid rail line. The department maintains close working relations with the university's College of Public and Urban Affairs, planning agencies and private sector firms in the metropolitan area, and with other geography departments in the state and region. Many opportunities for part-time employment are available in the metropolitan area. Internship opportunities are available.

The department is housed on the eleventh floor of the Urban Life Center with excellent facilities including a fully equipped cartography production laboratory, weather station, computer terminal, and electronic digitizer. The department publishes both a map and a research paper series. Listings of titles in print are available.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University follows the quarter system. Applicants for admission to the graduate school must have completed a bachelor's program from an accredited institution and present acceptable scores on both the Aptitude and Advanced portions of the Graduate Record Examination. Graduate assistantships are available on a competitive basis. Georgia State University is an Affirmative Action/Equal Employment and Educational Opportunity Institution.

STAF:

John M. Ball, Ph.D., Michigan State, 1961, Professor of Geography and Professor of Education—geographic education, Latin America

Sanford H. Bederman, Ph.D., Minnesota, 1973, Professor—cultural, Africa, poverty

Borden D. Dent, Ph.D., Clark, 1970, Professor—map design, cartography, urban

Frank Drago, M.A., Georgia State, 1976, Staff Cartographer

Truman A. Hartshorn, Ph.D., Iowa, 1968, Professor and Chairman—urban, transportation, American cities

Malcolm A. Murray, Ph.D., Syracuse, 1955, Professor—population, energy, medical

Richard Pillsbury, Ph.D., Pennsylvania State, 1968, Associate Professor—historical-urban, social

University of Georgia

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: 1951

DEGREES OFFERED: M.A., Ph.D., M.Ed., Ed.D.

GRANTED 7/1/81-6/30/82: 6 Masters, 2 Doctoral

GRADUATE STUDENTS IN RESIDENCE: 38 Masters 15 Ph.D.
NOT IN RESIDENCE: 4 Masters 4 Ph.D.

HEAD: James O. Wheeler

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chair, Graduate Studies Committee, Department of Geography, University of Georgia, Athens, Georgia 30602
Telphone (404) 542-2856

PROGRAMS AND RESEARCH FACILITIES: Work is offered in human, physical, and regional geography and in the various techniques used in geography. A considerable degree of latitude is allowed students in designing their programs of study. A student may concentrate in one aspect of geography or strive for understanding in two or more divisions. All students develop research and organizational skills by completing a thesis or dissertation. The M.Ed. and Ed.D. degrees with a concentration in geography are awarded in conjunction with the College of Education. Students interested in geographic education should correspond directly with the Head, Department of Social Science Education, University of Georgia, Athens, Georgia 30602.

The Department of Geography is housed in a modern, air-conditioned building which provides well equipped teaching and research accommodations including cartographic, climatic, photo interpretation, photogrammetric, and remote sensing equipment and laboratories. A broad range of computer and related facilities are also available within the department, including a data processing laboratory equipped with micro-computers, CRT graphics terminals, hard-copy output terminals, digitizers, and small plotters. A keypunch and program library are also available. The remote sensing laboratory, for example, contains a digitizer and interactive image processing and computer graphics system. A variety of visual interpretation equipment and a microdensitometer are also available for student use. Photographic and darkroom facilities, individual student carrels, research rooms, a rooftop weather station, field vehicles and equipment combine to make the department a stimulating place in which to study. Located in the same building is the Cartographic Services Laboratory which assists faculty and student research efforts.

The University's library holdings, particularly in geography, are extensive. Approximately 260,000 sheet maps and over 140,000 aerial photos are maintained in the nearby Science Library. The Computer Center operates one of the largest and most advanced computer facilities in the U.S., containing IBM 370/158, CDC, CYBER 76, and HEP systems.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Graduates of any accredited institution are eligible to apply for admission to the University's Graduate School. All correspondence concerning admission should be directed to the Department of Geography. Upon receipt of all required admission materials, the department's Graduate Studies committee will evaluate the application. A $10.00 non-refundable application fee is required. Normally graduate students are admitted to initiate their course work in the fall quarter, though exceptions are sometimes made. Whenever possible, prospective students should file completed applications no later than February 15 for admission in the following fall quarter.

Applicants should normally have had a "B" or higher undergraduate grade average and at least 1000 on the Aptitude Test of the Graduate Record Examination or its equivalent on the Miller Analogies Test.

Foreign language requirements are flexible for both the M.A. and Ph.D. programs at Georgia. For the Ph.D., the Department of Geography requires either a reading knowledge of two languages, one of which will be either French, German, or Russian; or an advanced knowledge (including conversational ability)• in one language; or reading knowledge of one language plus an advanced knowledge of an acceptable alternative research tool (statistics, mathematics, computer programming). For the M.A., reading knowledge of one foreign language or an acceptable alternative research tool is required.

Financial assistance is often available. Departmental assistantships are generally awarded for the nine-month academic year, contingent upon satisfactory performance and maintenance of a satisfactory (B or better) academic record. These assis-

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tantships pay $4890-$5212 to $6519-$6949, plus out-of-state tuition, and require one-third time work (13 hours per week). Up to 25 such appointments are made annually. Graduate School Assistantships pay $4890-$5212 for nine-month appointments and $6519-$6949 for twelve-month appointments plus out-of-state tuition, and require one-third time work. Recipients are selected from applicants from all University departments on a competitive basis. Recipients are employed in research or as assistants to faculty members. The Atlantic Steel Company annually provides funds that are used to support dissertation and thesis research in economic geography. Support through funded research projects is occasionally available. The University of Georgia operates on the academic quarter plan with three quarters constituting an academic year. Summer sessions are also held. Normally the department sponsors deserving graduate students for at least two years in an M.A. program and three years in a Ph.D. program.

STAFF:

Joseph W. Bencloski, Ph.D., Pennsylvania State, 1976, Temporary Assistant Professor—population, cultural, Anglo-America, geographic education

**William H. Berentsen, Ph.D., Ohio State, 1975, Associate Professor*—development, transportation, East Europe and U.S.S.R., quantitative methods

Elgene O. Box, Ph.D., North Carolina, Chapel Hill, 1978, Assistant Professor—biogeography, climatology, soils and environmental studies

**George A. Brook, Ph.D., McMaster, 1976, Associate Professor*—geomorphology, Africa

**Louis De Vorsey, Ph.D., London, 1965, Professor*—historical

**James S. Fisher, Ph.D., Georgia, 1967, Associate Professor*—North America, economic, methodology

R. James Heyl, Ph.D., Illinois, 1962, Associate Professor—transportation, recreation, industrial

Thomas W. Hodler, Ph.D., Oregon, 1977, Assistant Professor—cartography, hydrology

**Don R. Hoy, Ph.D., Illinois, 1960, Professor*—Latin America, economic

**James B. Kenyon, Ph.D., Chicago, 1960, Associate Professor*—urban, manufacturing, transportation, planning

**Vernon G. Meentemeyer, Ph.D., Southern Illinois, 1971, Associate Professor*—physical, climatology, microclimatology

Ronald L. Mitchelson, Ph.D., Ohio State, 1979, Assistant Professor—transportation, quantitative methods

**Clifton W. Pannell, Ph.D., Chicago, 1971, Professor*—East Asia, urban and regional systems, political

Albert J. Parker, Ph.D., Wisconsin, 1980, Assistant Professor—biogeography, climatology

**Merle C. Prunty, Ph.D., Clark, 1944, Alumni Foundation Distinguished Professor*—economic, Anglo-America, land utilization and settlement, U.S. South

Philip W. Suckling, Ph.D., British Columbia, 1977, Assistant Professor—solar radiation climatology, energy balance microclimatology

**Roy A. Welch, Ph.D., Glasgow, 1968, Research Professor*—remote sensing, photogrammetry, computer graphics, geographic information systems

**James O. Wheeler, Ph.D., Indiana, 1966, Professor and Head*—transportation, manufacturing, urban

*Members of Graduate Faculty who serve as Ph.D. Advisory Committee Chairmen.

EMERITUS FACULTY:

James A. Barnes, Ph.M., Wisconsin, 1938, Associate Professor
David C. Barrow, M.A., Georgia, 1966, Assistant Professor
James A. Shear, Ph.D., Clark, 1952, Professor
Kirk H. Stone, Ph.D., Michigan, 1949, Research Professor
James F. Woodruff, Ph.D., Michigan, 1952, Professor

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Johnson, Merrill L. "Industrial Evolution in Selected Labor-Intensive Environments of the Southern Piedmont: 1947 to 1977," 1981.* Mf., Univ. Microfilms.

Master's:

Jordan, Thomas R. "Measurement of Stream Channel Erosion Using Non-Metric Close Range Photogrammetry," 1981.*

Kelley, John L. "Land Use Classification Accuracy of Merged Landsat 3 Multi-Spectral Scanner (MSS) and Return Beam Vidicon (RBV) Digital Data," 1981.*

Offord, John. "State Welfare Expenditures and the Geography of Social Well-Being in Georgia: 1950-1970," 1981.*

Stackhouse, Linda L. "The Effect of Climatic Variability on Variations in Residential Electrical Energy Consumption for Sites in the Eastern United States," 1981.*

Stevenson, Claire L. "A Computer Algorithm for Assessing Rooftop Solar Potential," 1982.*

Sun, Chin-hong. "Relationship Between Fracture Traces and Groundwater Flow in the Southwest Georgia Aquifer," 1982.*

Yang, Ok-hyee. "Locational Factors and the Distribution of Selected Office Industries in Atlanta," 1982.* Mf., Univ. Microfilms.

University of Hawaii

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1920   GRADUATE PROGRAM FOUNDED: 1931

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 8 M.A., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 40 M.A. 25 Ph.D.
NOT IN RESIDENCE: 8 M.A. 6 Ph.D.

CHAIRMAN: Roland J. Fuchs

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Graduate Admissions Committee, Department of Geography, 2424 Maile Way, Porteous Hall Room 445, University of Hawaii at Manoa, Honolulu, Hawaii 96822 Telephone (808) 948-8465

PROGRAMS AND RESEARCH FACILITIES: In conjunction with other departments and research institutes affiliated with the University of Hawaii, the Geography Department offers programs of graduate study and research leading to the M.A. and Ph.D. degrees. Faculty interests and supporting strengths of the University provide advantages for the study of the following general topics: environmental studies and policies; resource systems; population, urbanization and regional development; cartography, remote sensing and computer applications; Pacific and Asian regional problems.

The Department is housed in a new Social Science building; departmental quarters provide graduate students with desk space and common facilities. Graduate students have access to modern cartographic equipment, including an ITEK photocompositor, an HP Graphics Terminal, and a Summagraphics Digitizer. They may also use the DEC 2060 time-sharing system, the IBM 370/158, and the Wang word-processing system. Research on topics of departmental specialization is backed by strong collections in several libraries. These include the University libraries, the Bishop Museum Library, the Hawaiian Sugar Planters' Association Library, and the East-West Center collections.

The M.A. program requires a core program of seminars, 15 credits in the field of specialization, an oral examination, and a thesis research paper.

Ph.D. requirements include a seminar on the history of geographic thought, a 30-credit major and 15-credit minor field of specialization, competence in one language plus an approved sequence of advanced courses in research techniques. The candidate must pass written and oral comprehensive examinations and submit a dissertation which is usually based on field work.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. Admission to the M.A. program generally requires a minimum grade point average of B (3.00 on a four-point scale) during the junior and senior years. Admission to the Ph.D. program requires a superior record in graduate work and promise of research ability. Both M.A. and Ph.D. applicants must submit transcripts, GRE results (aptitude tests only), and letters of appraisal from three referees. Available financial aids include teaching assistantships with stipends beginning at $5364 with remission of tuition, research assistantships, tuition remission awards, and National Research Fellowships. In addition, attention is called to East-West Center Scholarships which are available to Americans studying Asian or Pacific topics, as well as students from Asian or Pacific countries. The grants include travel to and from Hawaii, tuition, books, food, lodging and a personal allowance. If academic requirements have been met, American students may be eligible for a research period in the Asian or Pacific regions. The deadlines for application for assistantships are March 1 and September 1, and for East-West Center Scholarships, December 1.

FACULTY:

R. Warwick Armstrong, Ph.D., Illinois, 1963, Professor—public health and human ecology, medical geography

Jen-hu Chang, Ph.D., Clark, 1954, Professor—climatology, agriculture, China

Sen-dou Chang, Ph.D., Washington, 1961, Professor—China, cartography

Murray Chapman, Ph.D., Washington, 1970, Professor—population (mobility), field methods, Melanesia

Willard T. Chow, Ph.D., UC, Berkeley, 1974, Associate Professor—urban, social

Donald W. Fryer, Ph.D., London, 1958, Professor—economic development, Southeast Asia

Roland J. Fuchs, Ph.D., Clark, 1959, Professor—urbanization and population distribution policies, regional development, U.S.S.R. and Asia

Gary A. Fuller, Ph.D., Pennsylvania State, 1972, Associate Professor—population (fertility, policy aspects, diffusion), geography of prophylaxis

David H. Kornhauser, Ph.D., Michigan, 1956, Professor—urbanization and impact of technological change, Japan

Nancy D. Lewis, Ph.D., UC, Berkeley, 1981, Assistant Professor—medical geography, marine resources, Pacific

Brian J. Murton, Ph.D., Minnesota, 1970, Professor—folk-historical geography, peasant agrarian societies, tropical agriculture, South Asia

Peter N. D. Pirie, Ph.D., Australian National, 1964, Professor—population-resource interrelations and management, Pacific

Forrest R. Pitts, Ph.D., Michigan, 1955, Professor—social, cultural, computer applications, Korea and Japan

John M. Street, Ph.D., UC, Berkeley, 1960, Professor—tropical biogeography and agricultural geography, modification of biosphere

Lyndon L. Wester, Ph.D., UCLA, 1975, Associate Professor—plant geography, Quaternary geography, man-plant relationships

Everett A. Wingert, Ph.D., Washington, 1973, Associate Professor—cartography, remote sensing

PART-TIME FACULTY:

Bryce G. Decker, Ph.D., UC, Berkeley, 1970—biogeography, Pacific

Joseph R. Morgan, Ph.D., Hawaii, 1978—marine geography

Ilima A. Piianaia, M.A., Hawaii, 1980—Hawaii
Andrew N. White, Ph.D., Pennsylvania, 1976—health and public facility location

ADJUNCT AND AFFILIATE FACULTY:

John E. Bardach, Ph.D., Wisconsin, 1949—marine and aquatic resources
Kent Bridges, Ph.D., UC, Irvine, 1970—computer cartography
Harrison E. Brown, Ph.D., Johns Hopkins, 1941—resource systems
Fereidun Fesharaki, Ph.D., Surrey, 1974—energy resources
Juanita Liu, Ph.D., Simon Fraser, 1979—tourism, regional development
Patrick W. Naughton, Ph.D., West Indies, 1977—hazard assessments
Abraham Piianaia, B.A., Hawaii, 1953—Hawaii, Pacific
Paul J. Schwind, Ph.D., Chicago, 1970—land use and regional planning
Kirk R. Smith, Ph.D., UC, Berkeley, 1977—energy, environmental health

VISITING FACULTY:

G. Ross Cochrane, Ph.D., Auckland, 1977—remote sensing (Fall 1982)
Ronald D. Hill, Ph.D., Singapore, 1974—agriculture and land use (Fall 1982)
Lisle S. Mitchell, Ph.D., Ohio State, 1967—urban and recreation geography (Spring 1982)
Charles L. Rosenfeld, Ph.D., Pittsburgh, 1973—remote sensing (Spring 1982)

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Park, Chan Suk. "Diffusion of Rototillers in Korea to 1977," 1981.

Zintambila, Henry J. "Climatic Water Balance and Crop Production in Malawi," 1982.

Master's:

Hanson, Jaydee R. "Fisheries Development in Guangdong Province of the People's Republic of China, 1949-1979: A Case Study in Resource Management," 1981.

MacDorman, Marian. "Spatial Analysis of Human Fertility in Punjab and Haryana, India, 1971," 1981.

Matsumoto, Keith Y. "A Climatography of the Diurnal Variation of Rainfall Over the Island of Hawaii During Summer," 1982.

Santerre, Agnes Miranda. "Resource Utilization and Development Prospects for Small-Scale Fisheries: The Case of Sri Lanka," 1982.

Sato, Tokiko. "Geographical Aspects of Hospital Utilization on Oahu," 1982.

Shade, Patricia J. "Analysis of the Rainfall-Runoff Relationship in Moanalua Valley, Oahu, Hawaii," 1981.

Spears, Jerome V. "Pacing Versus Striding: An Assessment of Expediency and Measuring Accuracy," 1981.

Young, Raymond. "Cognitive Maps for Wayfinding: A Methodology for Tourist Map Design," 1981.

University of Idaho

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1970   GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.S., M.A.T.

GRANTED 7/1/81–6/30/82: 5

GRADUATE STUDENTS IN RESIDENCE: 11
NOT IN RESIDENCE: 11

HEAD: Harley E. Johansen

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Michelle Frafjord, Secretary, Graduate Admissions, Department of Geography, University of Idaho, Moscow, Idaho 83843
Telephone (208) 885–6216

PROGRAMS AND RESEARCH FACILITIES: M.S. is a minimum 30-semester-credit program, thesis or non-thesis option. M.A.T. is a 30-semester-credit non-thesis program.

The department emphasizes three areas of graduate research and instruction:

Cartography—including conventional and computer-generated design and communication techniques for production cartography.

Land and Resource Management—for prospective land surface managers stressing legal, socio-economic, environmental, and demographic aspects of land and resource development.

Regional and Town Planning—emphasizing land use and community development problems of rural counties and small towns and cities.

The department is in the College of Mines and Earth Resources and benefits from close association with geology and mining disciplines and the mineral industries of the northwest. Close ties are maintained with the university's several excellent programs in natural resources including the Remote Sensing Laboratory and the Water and Energy Resources Institute. Geography is directly involved in the Institute for Resource Management and shares courses with the Environmental Science and Regional Planning Department at Washington State University just eight miles away. The department maintains a production cartography lab providing "hands on" experience to students, and a lab for computer mapping and G.I.S.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: (Semester System). Admission requires minimum grade point of 2.4 overall, letters of recommendation from three professors and/or job supervisors evaluating applicant's ability to pursue graduate studies. Transcripts of all academic experience and General Graduate Record Examination required. Undergraduate program need not be in geography. Part-time teaching assistantships and other aid available.

FACULTY:

Harry H. Caldwell, Ph.D., Clark, 1951, Professor—political, recreation, economic, land use planning, Asia

Richard L. Day, Ph.D., Illinois, 1959, Associate Professor—weather and climate, Pacific Northwest, rail passenger transportation

Alan A. DeLucia, Ph.D., Washington, 1974, Professor and Director, Cart-O-Graphics Laboratory—cartography, air photo interpretation and remote sensing

Nancy B. Hultquist, M.A., Cincinnati, 1967, A.B.D., Iowa, Assistant Professor, half time—computer mapping and graphics, man-environment interaction, quantitative and computer methods

Harley E. Johansen, Ph.D., Wisconsin, 1974, Professor and Head—economic, population, settlement and diffusion, rural development

O. Paul Matthews, J.D., Idaho, 1975, Ph.D., Washington, 1980, Assistant Professor—legal aspects of land and resource regulation, mineral law and mining regulation, political

Sam M. W. Scripter, Ph.D., Wisconsin, 1967, Professor and Associate Dean of the College of Mines & Earth Resources—computer applications, local and regional planning, geographical information systems, transportation

ADJUNCT AND AFFILIATE FACULTY:

William B. Hall, Ph.D., Wyoming, 1961, Professor of Geology and Director, Geophotography and Remote Sensing Center—geomorphology

John F. Hultquist, Ph.D., Iowa, 1972, Affiliate Faculty—regional development, quantitative methods, behavioral

Maynard M. Miller, Ph.D., Cambridge, 1956, Professor of Geology and Dean, College of Mines and Earth Resources—geomorphology

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

West, Keith Douglas. "Land Alienation and Fractionated Heirship in Nez Perce Country—A Study of Resource Control," 1982

Illinois State University

DEPARTMENT OF GEOGRAPHY-GEOLOGY

DATE FOUNDED: 1900 GRADUATE PROGRAM FOUNDED: 1945

DEGREES OFFERED: M.A., M.S.

GRANTED 7/1/81-6/30/82: 2

GRADUATE STUDENTS IN RESIDENCE: 10
NOT IN RESIDENCE: 3

CHAIRPERSON: Michael D. Sublett

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Paul F. Mattingly, Department of Geography-Geology, Illinois State University, Normal, Illinois 61761
Telephone (309) 436-7649

PROGRAMS AND RESEARCH FACILITIES: Program fields available to graduate students which correspond to faculty interest and expertise include: physical geography, cartography, remote sensing, urban-economic geography, rural land use, historical-cultural geography, and resource management. Most faculty also have regional strengths, and many have done intensive foreign area, national, or local field work.

Illinois State University has a superlative map collection housed in the new University Library. The Library's holdings of more than 800,000 volumes are supplemented by the 3,000,000 volume collection of the Center for Research Libraries and by a courier service to the University of Illinois Library. The University Computer Services has programming and statistical consulting services available to students engaged in quantitative research. Computer Services also maintains a 30-inch Calcomp digital plotter and a new Zeta plotter. A digitizer and keypunch facility are housed in the Department, and a large library of spatially oriented programs, including GRID, POLYVRT, SYMAP, SYMVU, and CALFORM, are also available. The University and Department both maintain weather observation stations. The Department has a modern photographic darkroom and large stream table for student use.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Illinois State University admits persons to master's degree programs on the basis of academic record and other criteria. All students seeking admission to the master's degree program in geography must submit scores on the Aptitude Test of the Graduate Record Examination.

Graduate assistantships and various loans and scholarships are available to qualified students. Illinois State University operates on a semester system.

GEOGRAPHY STAFF:

Paul S. Anderson, Ph.D., Australian National, 1979, Assistant Professor—cartography, remote sensing, distance education

George Aspbury, Ph.D., Michigan, 1975, Assistant Professor—computer cartography, quantitative methods, regional economic development

Norman C. Bettis, Ph.D., Michigan State, 1974, Associate Professor (adjunct)—geographic education

Eric S. Johnson, Ph.D., Kansas, 1968, Assistant Professor—conservation, meteorology, economic

Paul F. Mattingly, Ph.D., Pennsylvania State, 1961, Professor—urban, land use, planning

E. Joan Miller, Ph.D., North Carolina, 1965, Professor—cultural landscapes, geography in education, Northwestern Europe, United States

James E. Patterson, Ph.D., Illinois, 1958, Professor—resource management, field geography, physical, Illinois, United States

Else T. A. Schmidt, Ph.D., Munich, 1959, Professor—Common Market land use planning, Europe, Africa, Middle East

Stanley B. Shuman, Ph.D., Illinois, 1957, Professor—physical, Australia and Pacific

Michael D. Sublett, Ph.D., Chicago, 1974, Associate Professor and Chairperson—rural, applied, Illinois

William D. Walters, Jr., Ph.D., Indiana, 1974, Associate Professor—historical, historic preservation

GEOLOGY STAFF:

Richard Hart, Ph.D., Iowa, 1961, Associate Professor—micropaleontology, oceanography

James Kirchner, Ph.D., Iowa, 1969, Associate Professor—mineralogy, igneous petrology, field geology

Robert Nelson, Ph.D., Iowa, 1970, Associate Professor—structural geology, Quaternary research, geomorphology

Thomas Searight, Ph.D., Illinois, 1959, Professor—sedimentation, stratigraphy, field geology, fuels

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Paquet, John F. "The Spatial Diffusion of McDonald's Restaurants in Illinois," 1981.

University of Illinois

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1945   GRADUATE PROGRAM FOUNDED: 1950

DEGREES OFFERED: M.A., M.S., Ph.D.

GRANTED 7/1/81-6/30/82: 5 Masters, 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 23 Masters 16 Ph.D.
NOT IN RESIDENCE: 0 Masters 5 Ph.D.

HEAD: Arthur Getis

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor Arthur Getis, Head, Department of Geography, University of Illinois, 607 South Mathews, Urbana, Illinois 61801
Telephone (217) 333-1880

PROGRAMS AND RESEARCH FACILITIES: Programs of graduate study at the University of Illinois may be classified into five broad fields with specialization in a variety of interest areas. *Economic Geography* and *Regional Science* including: Urban and Regional Analysis, Industrial Location, Regional Economic Development, Resources Utilization, Transportation, and Public Policy Evaluation. *Historical Geography:* Analysis of historic landscapes, including: Historic Preservation, Morphology of U.S. Cities, Cultural Landscape Evolution, and the Perception of Past Landscapes. *Geomorphology:* Periglacial, Quaternary studies, coastal. Other interest areas include: Climate, Soils and Biogeography. *Social Geography:* Geographic aspects of social processes and patterns, including: Cognition, Communications/Diffusion, Migration, Voting Behavior, Ethnic and Racial Minorities, Urban Residential Patterns, and Urban Pathologies. *Technical Master's* including: Remote Sensing and Cartography.

Departmental facilities include the Spatial Data Analysis Laboratory as well as cartographic and soils laboratories, a diffractometer and spectrometer, and computer terminals. Other research facilities include a library which is the largest publicly supported university library in the United States, a Map and Geography Library containing an excellent collection of monographs and journals and one of the largest map collections in the country, the Social Science Quantitative Laboratory, and large multiple component computing and graphics systems. The University of Illinois is the site of the international headquarters of the Regional Science Association.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. Minimum standard for admission to the Masters program is a B average, higher for the Ph.D. program. Teaching assistantships, research assistantships and fellowships are available. Currently, one-half time appointments for assistants carry a stipend of about $4600 plus remission of tuition. Nearly all resident graduate students are supported by fellowships, scholarships and assistantships.

FACULTY:

Charles S. Alexander, Ph.D., UC, Berkeley, 1955, Professor—geomorphology (particularly coastal), ecology, field methods, Quaternary and Caribbean studies

James A. Bier, M.S., Illinois, 1955, Instructor—thematic cartography, map production

Marilyn A. Brown, Ph.D., Ohio State, 1977, Assistant Professor—environmental cognition, innovation diffusion, contemporary urban ecology

James E. Burt, Ph.D., 1980, UCLA, Assistant Professor—climatology, hydrology, quantitative analysis

Jerome D. Fellmann, Ph.D., Chicago, 1950, Professor—urban, historical, bibliographic techniques, U.S.S.R.

Thomas D. Frank, Ph.D. Utah, 1979, Assistant Professor—remote sensing, computer cartography

Arthur Getis, Ph.D., Washington, 1961, Professor and Head —settlement theory, spatial patterns, urban analysis

Bruce M. Hannon, Ph.D., Illinois, 1970, Associate Professor—energy use and conservation, environmental planning

Geoffrey J.D. Hewings, Ph.D., Washington, 1969, Associate Professor—transportation, regional development, methods of urban and regional analysis

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James O. Huff, Ph.D., Northwestern, 1973, Associate Professor—urban geography, population redistribution, central place theory, mathematical structures

John A. Jakle, Ph.D., Indiana, 1967, Associate Professor—historical and social geography

Donald L. Johnson, Ph.D., Kansas, 1972, Associate Professor—geomorphology, zoogeography, soils, paleoecology, Quaternary studies

John V. O'Loughlin, Ph.D., Pennsylvania State, 1973, Associate Professor—urban, political, social, Europe

Howard G. Roepke, Ph.D., Northwestern, 1953, Professor—industrial location manufacturing, economic development, resource management

Curtis C. Roseman, Ph.D., Iowa, 1969, Associate Professor—social, migration, quantitative

John Thompson, Ph.D., Stanford, 1958, Professor—cultural. historical, Latin America

Colin E. Thorn, Ph.D., Colorado, 1974, Associate Professor—periglacial geomorphology, Quaternary studies, geomorphic paradigms

AFFILIATED FACULTY:

David E. Boyce, Ph.D. (Regional Science), Pennsylvania, 1966, Professor—transportation models and methods, urban location and transportation

Stanley Changnon, M.S., Illinois, 1956, Professor and Chief, Illinois Water Survey—meteorology, climatology

David A. Cobb, M.S. (Library Science), Indiana, 1973, Associate Professor—Map and Geography Librarian

Frank Southworth, Ph.D., Leeds, 1977, Assistant Professor—transportation modeling

Wayne M. Wendland, Ph.D., Wisconsin, 1972, Associate Professor—climatology, meteorology, paleoclimatology

University of Illinois at Chicago

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1964 GRADUATE PROGRAM FOUNDED: 1972

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 5

GRADUATE STUDENTS IN RESIDENCE: 21
NOT IN RESIDENCE: 7

HEAD: Siim Sööt

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Gary L. Fowler, Director of Graduate Studies, Department of Geography, P.O. Box 4348, University

of Illinois at Chicago, Chicago, Illinois 60680
Telephone (312) 996-3112

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers an M.A. in Environmental Studies and Urban Geography. The program reflects the premise that geography is a spatial science which is concerned with people's relationship with the social, economic and physical environment. Although the graduate curriculum is tailored to the special needs of each student many choose from established curricula such as environmental behavior, environmental management, industrial and commercial development, transportation, and environmental impact of urbanization. Furthermore, student curricula can take advantage of the Geography faculty's affiliations with the Energy Resources Center, Urban System Laboratory, School of Urban Sciences and the School of Public Health (at the Medical Center). Many students also avail themselves of the employment opportunities and training capabilities of the department's Chicago Area Geographical Information Study (CAGIS Laboratory), a division of the department specializing in the development and management of information systems and data banks.

The Department of Geography is located in the Behavioral Science Building, which also houses a remote computer terminal room with a highspeed printer, numerous interactive terminals, and a full time consultant. Additionally the department has two computer terminals, an Auto-Trol 3900 (4' x 6') Digitizer, a keypunch, a fully equipped dark room, a complete line of cartographic equipment and several specialized teaching laboratories.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The department, operating on the quarter academic system—with 8 week summer quarters—offers a large number of teaching and research assistantships. These assistantships carry tuition and fee waivers, although some tuition-only waivers are also available. Opportunities for part-time professional employment also exist in the Chicago area. The department welcomes students who wish to pursue work toward a master's degree in Geography while maintaining their employment.

Students may be admitted to UIC at the beginning of each quarter. Students desiring financial aid are encouraged to submit their completed applications before March 1, when most assistantships and tuition and fee waivers for the following academic year are awarded. Late applications may also be eligible for financial aid including aid from other academic units on campus. Requests for further information and applications for admission and financial aid should be addressed to the Director of Graduate Studies.

STAFF:

Lyndon R. Babcock, Ph.D., University of Washington, Director, Environmental Health, University of Illinois Medical Center—environmental quality, pollution studies and policy

James B. Blaut, Ph.D., Louisiana State—cultural, behavioral, geographic learning, history and philosophy, peasant agriculture, Latin America

Raymond M. Brod, M.A., Northeastern Illinois, Cartographer, UIC Cartographic Laboratory

Douglas B. Carter, Ph.D., Washington—climatology, surface environmental conditions, biogeography, North America

Alden S. Cutshall, Ph.D., Ohio State (Emeritus)—regional development, Asia

Edwin H. Draine, Ph.D., Chicago (Emeritus)—environment and resource management and policy, economic, Soviet Union

Gary L. Fowler, Ph.D., Syracuse, Director of Graduate Studies, Associate Director, Energy Resources Center—behavioral, regional development and migration, energy studies and policy, North Africa and the Middle East

Bruce G. Gladfelter, Ph.D., Chicago—geomorphology, geoarcheology, paleogeography and environmental studies (joint appointment with Anthropology)

James E. Landing, Ph.D., Pennsylvania State—cultural, religious, historical, teaching of geography, North America

Albert J. Larson, Ph.D., Nebraska—historical, cultural, rural environments and settlement, cartography, North America, Europe

David A. Merrill, M.A., Illinois at Chicago Circle, Director of Research, Chicago Area Geographic Information Study

David M. Solzman, Ph.D., Chicago—urban, urban environments, economic, philosophy of the landscape

Siim Sööt, Ph.D., Washington, Department Head—transportation, economic, quantitative methods, computer cartography, Soviet Union, Europe

Edwin H. Thomas, Ph.D., Northwestern—geographic information systems, urban (joint appointment with Health Resources Management, Medical Center)

Clifford E. Tiedemann, Ph.D., Michigan State—economic, settlement and land use, pattern analysis, cartography (joint appointment with Environmental Health, Medical Center)

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Casciato, Daniel F. "Geographical Aspects of the Diffusion of Satellite Earth Stations Serving Cable Television within the Continental United States," 1982.

Johnson, Kenneth. "A Benefit/Cost Methodology for Investigating Waterfront Redevelopment Alternatives," 1982.

Joyce, Leonard. "The Impact of Bus Service Changes on Ridership," 1981.

Krob, Gregory. "The Economic Impact of a Regional Shopping Center on the Central City: A Study of the Brickyard Shopping Center, Chicago, Illinois,' 1982.

Soberekon, Pikibo. "The Changing Impact of Elevated Rail Rapid Transit System on Land Values in Chicago's Northside," 1982.

Indiana State University

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

DATE FOUNDED: 1893 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A. in Geography, M.A. in Geology, M.A. in Earth Science, Ph.D. in Geography. Minors are available in appropriate number of fields.

GRANTED 7/1/81-6/30/82: 1 Masters, 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 40
NOT IN RESIDENCE: 10

CHAIRPERSON: Benjamin Moulton

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Benjamin Moulton, Chairperson, Department of Geography and Geology, Indiana State University, Terre Haute, Indiana 47809
Telephone (812) 232-6311

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography and Geology is housed in contemporary quarters with space and excellent facilities for research and laboratories. A staff cartographer is available. There are at present a map library, remote sensing laboratory, cartography laboratories, darkrooms, quantitative laboratory, graduate office space and preparation rooms. The department owns a bank of electronic calculators. For field work and research, three vans are available. An experiment station 16 miles away is suitable for soils study, mapping and field laboratory.

The University Library has a science library in the same building that houses the Department of Geography and Geology. The University acts as a depository for the Superintendent of Public Documents. The map library contains 160,000 maps and a growing aerial photo collection. A Control Data Corporation 171 computer and a Houston Instruments DP8 plotter are available for research through the Computer Center.

The remote sensing laboratory has state-of-art capabilities for machine-assisted processing of spectral data via a remote computer terminal to the Laboratory for Applications of Remote Sensing (LARS)/Purdue University. In addition this laboratory has a GOES weather satellite receiving station, Kelsh plotter, Numonics digitizer, zoom transfer scope, diaze image processing equipment, digital image display, and standard aerial photointerpretation equipment.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on the semester system and has an active summer program of 10 weeks. Students requesting admission must complete application papers. All students must take the Graduate Record Examination. Transcripts and letters of reference must be submitted. Assistantships and Fellowships are available. The amount would depend upon qualifications. Holders of financial assistantships are exempted from tuition charges.

STAFF:

Donald W. Ash, Ph.D., SUNY Binghamton, 1979, Assistant Professor—hydrology, geomorphology

Byron K. Barton, Ph.D., Nebraska, 1949, Professor Emeritus—regional research geography

Robert W. Bastian, Ph.D., Indiana, 1968, Professor—historical

William D. Brooks, Ed.D., Indiana, 1969, Professor—physical, cartography

Adelord J. Cantin, M.A., Iowa, 1957, Assistant Professor—physical

John H. Cleveland, Ph.D., Indiana, 1962, Professor—economic geology, petrology

Robert R. Drummond, Ph.D., Northwestern, 1953, Professor—urban, geomorphology

Prodip K. Dutta, Ph.D. candidate, Indiana, Assistant Professor—sedimentary geology/petrology, optical mineralogy

James L. Guernsey, Ph.D., Northwestern, 1957, Professor—land use, resource management

John C. Hook, Ph.D., Iowa, 1956, Professor—physical, astronomy, quantitative

Robert Howe, Ph.D., Wisconsin, 1968, Professor—paleontology, remote sensing

Robert Larson, Ph.D., Indiana, 1975, Assistant Professor—urban

Lois Latta, Ph.D., Illinois, 1959, Associate Professor—Anglo-America, Latin America

Paul Mausel, Ph.D., North Carolina, 1966, Professor—soils, remote sensing

John R. McGregor, Ph.D., Illinois, 1965, Professor—economic, industrial

Victor C. Miller, Ph.D., Columbia, 1953, Professor—geomorphology, photo interpretation

Benjamin Moulton, Ph.D., Indiana, 1950, Professor and Chairman—field geography, Anglo-America

John E. Oliver, Ph.D., Columbia, 1969, Professor—climatology, physical

Donald E. Owen, Ph.D., Wisconsin, 1963, Professor—paleontology, stratigraphy

Akhtar Siddiqi, Ph.D., London, 1964, Professor—Asia, economic

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Beaven, Lee W. "Anomalous Longitudinal Stream Profiles on a Selected Section of the Tipton Till Plain of Indiana: A Case Study of Apparent Knickpoint Migration in Warren and Benton Counties," 1982.

Talbett, Michael S. "Acid Mine Drainage and the Acid Mine Index," 1981.

Thompson, Donald M. "Anomalous Pediments in Boulder River Valley, Jefferson County, Southwest Montana," 1982.

Master's:

Badger, Carla J. "The Reclamation of the Victory Mine Site, Vigo County, Indiana," 1981.

Indiana University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: 1946

DEGREES OFFERED: M.A., M.A.T., Ph.D.

GRANTED 7/1/81-6/30/82: 5 M.A., 4 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 9 M.A. 0 M.A.T. 18 Ph.D.
NOT IN RESIDENCE: 4 Ph.D.

CHAIRMAN: Robert N. Taaffe

FOR CATALOG AND FURTHER INFORMATION WRITE TO: John Odland, Director of Graduate Admissions, Department of Geography, Indiana University, Bloomington, Indiana 47405
Telephone (812) 335-5155

PROGRAMS AND RESEARCH FACILITIES: The M.A. and Ph.D. programs of the Geography Department are research-oriented degree programs in the science of geography. Courses in advanced quantitative methods in geography, research design, geographic theory, and models in geography constitute the core of study for both degrees.

Requirements for the M.A. degree: (1) completion of the core courses noted above; (2) completion of a Master's thesis or two research papers and 30 hours credit; (3) completion of a comprehensive examination covering the core courses and the student's research.

The Ph.D. degree involves (1) competence in research skills; (2) completion of an oral and written exam covering the student's major area of specialization within the department and his minor in a related department; and (3) completion of a Ph.D. dissertation.

The M.A.T. degree provides the skills and basic geographical knowledge necessary for teaching geography in secondary schools or junior colleges. Requirements for the M.A.T. degree are 36 credits, of which 30 must be graduate credit; no thesis is required.

Since 1979-80, the Geography Department and the School of Public and Environmental Affairs have offered a combined M.A.-M.S.E.S. program in environmental science and a new Ph.D. degree in Regional Analysis and Planning for students who are interested in careers in planning.

Research facilities include the Geography and Map Branch Library; cartographic, photogrammetric, and photographic equipment; and the Research Computing Center, which houses a CDC 6600 Computer system. The department contains a quantitative research laboratory with a terminal to the Computing Center.

The Department works very closely with several other divisions of the University including the School of Public and Environmental Affairs, the Water Resources

Research Center, the Russian and East European Institute, the Department of East Asian Languages and Cultures, African Studies, and Latin American Studies.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University is on the semester system. Admission to the M.A. program requires an undergraduate major in geography or its equivalent. The Ph.D. program requires an M.A. in geography from Indiana or its equivalent. Academic year financial awards include NDEA, Title IV; National Science Foundation Fellowships; University Fellowships; graduate teaching assistantships ($4000 and over for 10 months). The Department also awards a fairly large number of Departmental Fee Remission Awards which will pay all fees up to 12 hours credit, except for allocated fees which are currently $78 per semester. For an out-of-state student, the combined assistantship and fee-remission represents an award of over $7000. Assistants may carry up to 12 hours of graduate credit per semester and are expected to work 20 hours per week for the Department. Also available are Graduate Fee Remission Scholarships, Dissertation Year Fellowships ($2000 to $3600), and Doctoral Student Grant-in-Aid awards. Applications for the 1982–83 academic year should be received by March 1, 1982. Notification of awards will be made by April 1. Many graduate students also serve as research assistants on externally funded research projects.

STAFF:

Thomas F. Barton, Ph.D., Nebraska, 1935, Professor Emeritus—urban, conservation, Southeast Asia

Don C. Bennett, Ph.D., Syracuse, 1957, Associate Professor—cultural, urban, Southeast Asia

William R. Black, Ph.D., Iowa, 1969, Professor—economic, transportation, quantitative methods

Dennis Conway, Ph.D., Texas, 1976, Assistant Professor—migration, urban

A. Stewart Fotheringham, Ph.D., McMaster, 1980, Assistant Professor—spatial interaction models, transportation, quantitative

Charles E. Greer, Ph.D., Washington, 1975, Associate Professor—China, resource management

Kingsley E. Haynes, Ph.D., Johns Hopkins, 1971, Professor and Director, Center for Urban and Regional Analysis—economic, location theory, geographical methodology

John M. Hollingsworth, M.S., Indiana, 1970, Departmental Cartographer

Robert C. Kingsbury, A.M., Kansas, 1951, Associate Professor—cartography, aerial photography, South Asia

David B. MacKay, Ph.D., Northwestern, 1971, Professor of Marketing and Geography—spatial consumer behavior, cognitive mapping

Theodore K. Miller, Ph.D., Northwestern, 1971, Associate Professor and Associate Director, Center for Urban and Regional Analysis—urban, fluvial, quantitative

John Odland, Ph.D., Ohio State, 1972, Associate Professor—urban, quantitative methods, mathematical models

Greg A. Olyphant, Ph.D., Iowa, 1979, Assistant Professor—geomorphology, mathematical models, Arctic

Lawrence Onesti, Ph.D., Wisconsin, 1973, Associate Professor—fluvial geomorphology, Arctic

Rickie Sanders, Ph.D., Ohio State, 1980, Assistant Professor-migration, urban, sub-Saharan Africa

Daniel Seldin, M.L.S., Maryland, 1973, Geography and Map Librarian

Robert N. Taaffe, Ph.D., Chicago, 1959, Professor—economic, transportation, urban, U.S.S.R. and Eastern Europe

Ernest H. Wohlenberg, Ph.D., Washington, 1970, Associate Professor—economic, natural resources, economic development

ASSOCIATED PROFESSORS IN OTHER DEPARTMENTS:

David F. Parkhurst, Ph.D., Wisconsin, 1970, Associate Professor, Public and Environmental Affairs—plant geography

James C. Randolph, Ph.D., Carleton, 1972, Associate Professor, Public and Environmental Affairs—zoology-ecology

George M. Smerk, D.B.A., Indiana, 1963, Professor of Transportation—urban transportation

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Robbins, John Christopher. "Routing Hazardous Materials Shipments," 1981.

Shannon-Daly, Susan K. "Intraurban Housing Search Procedure and the Spatial Behavior of Households Differentiated by Work Status," 1981.

Shrestha, Nanda Raj. "The Process of Rural-to-Rural Migration in the Agrarian Economy of Nepal," 1982.

Soranno, Michael A. "Effects of Urban Growth on Stream-Flow Regimes on Long Island, New York," 1981.

Master's:

Thapa, Poonam. "The Proximate and Structural Determinants of Internal Migration in Nepal," 1981.

IUP—Indiana University of Pennsylvania

DEPARTMENT OF GEOGRAPHY AND REGIONAL PLANNING

DATE FOUNDED: 1930's GRADUATE PROGRAM FOUNDED: 1960

DEGREES OFFERED: M.A., M.S., M.Ed.

GRANTED 7/1/81-6/30/82: 1 M.A., 2 M.S.

GRADUATE STUDENTS IN RESIDENCE: 9

CHAIRPERSON: Ruth I. Shirey

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairperson, Department of Geography and Regional Planning, IUP, Indiana, Pennsylvania 15705
Telephone (412) 357-2250

PROGRAMS AND RESEARCH FACILITIES: The M.A. and M.S. programs at IUP provide a common core of course work in geographic philosophy, research, and techniques. The M.S. student must elect a concentration in regional development, regional planning, or cartography while the M.A. student is free to custom design his or her program. Thesis and non-thesis options are available.

The department occupies the ground floor of Leonard Hall. Facilities include the cartography and computer labs, a reading room and map library and graduate student offices.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Applicants must have Bachelor's degree with 2.6 QPA, satisfactory score on GRE, and satisfactory recommendations.

Graduate assistantships available. Full-time students interested in appointments for the academic year should request applications from the Dean of the Graduate School prior to February 1.

STAFF:

Donald J. Ballas, Ph.D., Nebraska, Professor—cultural, historical, Africa

Noland R. Heiden, Ph.D., Michigan, A.I.C.P., Associate Professor—planning

Gopal S. Kulkarni, Ph.D., Pittsburgh, Professor—urban, economic, Asia

Vincent P. Miller, Jr., Ph.D., Michigan State, Professor—political, Europe, regional development

James E. Payne, M.A., North Carolina, Professor—cartography, map and photo interpretation, remote sensing

Ruth I. Shirey, Ph.D., Tennessee, Professor—Latin America, energy, industrial

Leonard P. Tepper, Ph.D., Pittsburgh, Professor—research methods, population, economic

Charles E. Weber, Ed.D., Columbia, Professor— conservation, Asia, land use

Maurice M. Zacur, Ed.D., Pennsylvania State, Professor—geographic education, Pennsylvania

The University of Iowa

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: 1946

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 6 M.A., 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 17 M.A. 21 Ph.D.
NOT IN RESIDENCE: 2 M.A. 4 Ph.D.

CHAIRMAN: James B. Lindberg

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Rex Honey, Graduate Admissions Coordinator, The University of Iowa, Iowa City, Iowa 52242 Telephone (319) 353-3131

PROGRAMS AND RESEARCH FACILITIES: The Iowa Ph.D. program has long held a reputation for excellence in quantitative geographical analysis. Research encompasses both current policy issues and longer-range theoretical concerns. Areas of specialization include:

- ecosystems analysis
- environmental policy, energy, and water resources
- locational analysis of political, economic, and social processes
- medical geography
- regional growth and international development
- transportation planning and policy analysis.

An applied Master's Program has been designed to provide special training for students interested in non-academic careers. Graduates of the program are prepared for positions with private firms or governmental agencies involved in market analysis, urban and transportation analysis, land development, environmental impact studies, resource evaluation, health services planning, and related areas.

In conjunction with other departments on campus, Geography has recently initiated a Regional Science Program. This will complement the interdisciplinary program in transportation that has been flourishing for over a decade.

The faculty strives to maintain an atmosphere in which each student can attain not only the intellectual rigor growing out of close student-faculty research interests, but also the excitement of truly independent creativity.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: In determining the admission of a student to its graduate program, the department considers the total record of each student individually, including: (1) undergraduate grade point average (admitted on condition if GPA is below 2.75); (2) scores on the Graduate Record Examination Aptitude Test (applicants for assistantships must submit GRE scores of 1100 on verbal and quantitative examinations combined); (3) at least three letters of recommendation; (4) an essay in which the applicant sets forth the reasons for wanting to continue the study of geography at the University of Iowa.

Regular departmental Teaching and Research Assistantships carry stipends upwards from $6600 for the two-semester academic year. Also available are a limited number of Teaching and Research Fellowships which provide stipends of at least $8000 for year-round support, plus full tuition scholarships for up to four years. Funded projects also provide for research assistants. Of 38 full-time students in 1981-1982, 92 percent received funding from University or government sources.

The 1982-83 tuition rate for in-state graduate students is $1,200 for the academic year. Out-of-state students pay $2,800. All teaching and research assistants are charged at in-state rates. Deadline for applicants who wish to be considered in the initial round of financial aid awards is February 15.

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STAFF:

John W. Fuller, Ph.D., Washington State, 1968, Professor (joint with Urban and Regional Planning and Economics) and Director of the Institute of Urban and Regional Research—transportation and policy analysis

Rex Honey, Ph.D., Minnesota, 1972, Associate Professor—political geography, urban and regional policy analysis

Joel L. Horowitz, Ph.D., Cornell, 1967, Associate Professor (joint with Economics)—transportation systems analysis, discrete choice analysis, econometrics

Andrew M. Isserman, Ph.D., Pennsylvania, 1975, Associate Professor (joint with Urban and Regional Planning and Economics)—methods of urban and regional analysis, regional development and policy, spatial demographic analysis

Mary Ann Lee, Ph.D., Hawaii, 1979, Assistant Professor—ecosystem analysis

James B. Lindberg, Ph.D., Wisconsin, 1963, Professor and Chairman—industrial location, energy resources and use

Michael L. McNulty, Ph.D., Northwestern, 1966, Professor—geographic perspectives on development, urban, Africa

R. Rajagopal, Ph.D., Michigan, 1973, Associate Professor—resource and environmental management, information systems

David R. Reynolds, Ph.D., Northwestern, 1966, Professor—location theory and collective decision-making, behavioral analysis, political

Gerard Rushton, Ph.D., Iowa, 1964, Professor—location theory, medical, spatial planning in developing countries, behavioral

Graham A. Tobin, Ph.D., Strathclyde, 1978, Assistant Professor—water resources, hydrology, flood hazard and environmental management

EMERITUS FACULTY:

Clyde F. Kohn, Ph.D., Michigan, 1940, Professor

Harold H. McCarty, Ph.D., Iowa, 1929, Professor

ADJUNCT FACULTY:

Marie Rose Popp Klugman, Ph.D., Iowa, 1981, Adjunct Assistant Professor—climatology

Mickey Lauria, Ph.D., Minnesota, 1980, Assistant Professor, Graduate Program in Urban and Regional Planning—community development

Russell Lee, Ph.D., McMaster, 1978, Research Associate, Oak Ridge National Laboratory, Adjunct Assistant Professor—urban and regional modeling, medical, regional policy

Jordan J. Louviere, Ph.D., Iowa, 1973, Associate Professor in Marketing—behavioral geography, consumer spatial behavior, transportation and travel choice, human decision-making and choice

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Meneley, Gilbert Joseph, Jr. "Modeling Geographic Implications of Public Policies on Hospital Services," 1981.

Shelley, Fred McPherson. "Experimental Analysis of Constitutional Choice in the Provision of Local Public Goods," 1981.

Strathman, James Gerald. "Estimating the Effects of a Relative Increase in Energy Prices on Production and Location in the U.S. Cement Industry," 1981.

Master's:

Carmack, Charlene. "An Analysis of Policy Options for the Protection of Ground Water in Iowa," 1982.

The Johns Hopkins University

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL ENGINEERING

DATE FOUNDED: 1948 GRADUATE PROGRAM FOUNDED: 1948

DEGREES OFFERED: M.A., M.S.E., Ph.D.

GRANTED 7/1/81–6/30/82: 4 Masters, 8 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 1 Masters 56 Ph.D.
NOT IN RESIDENCE: 1 Masters 16 Ph.D.

CHAIRMAN: M. Gordon Wolman

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. M. Gordon Wolman, Chairman, Department of Geography and Environmental Engineering, The Johns Hopkins University, Baltimore, Maryland 21218
Telephone (301) 338-7090

PROGRAMS AND RESEARCH FACILITIES: Program objectives include the study of (1) the natural processes of land, air, and water including underlying physical, chemical and biological principles, (2) the relationship between man as an individual and as a member of social groups to his natural and social environment; and (3) systems analysis and economics for public decision making. Specific graduate programs are tailormade and designed to permit each student to focus upon topics of interest and to develop competence in fundamental skills essential to research in his chosen field and problem area. In pursuit of these objectives students are expected to pursue work beyond the confines of the Department. Areas of special strength are: a) surficial earth processes of geomorphology, plant geography, soils, and hydrology; b) environmental biology including aquatic biology, ecology and population dynamics; c) human spatial location, with emphasis on behavioral models, perception of the natural and social environment, models of urban population dynamics, and regional science; d) engineering science and technology with emphasis on sanitary engineering systems analysis, and physical and chemical processes in the environment.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. *Admission requirements:* interests in the field coincident with those of the Department, and evidence of competence to pursue graduate work at the M.A. or Ph.D. level; *Financial Aid:* fellowships, stipends, research support including Federal programs available.

STAFF:

Dr. John Boland, Professor—environmental engineering
Dr. Lucien Brush, Professor—sediment transport
Dr. John Cady, Lecturer—soil science
Dr. Charles Chamberlin, Assistant Professor—sanitary engineering
Dr. Jared Cohon, Professor—environmental systems
Dr. John Dyckman, Professor—urban studies
Dr. Jack Fisher, Professor—urban studies
Dr. Jerome Gavis, Associate Professor—chemical engineering
Dr. Steve Hanke, Professor—resource economics
Dr. David Harvey, Professor—behavioral geography
Dr. Charles ReVelle, Professor—systems analysis
Dr. M. Gordon Wolman, Professor—geomorphologic processes

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Coleman, Derrick J. "Reassessment of the Concept of Bankfull Discharge and Floodplain Formation in Some Rivers in the Middle Atlantic Region," 1982.

Current, John R. "Multiobjective Design of Transportation Networks," 1981.

Dubin, Robin Ann. "Residential Location Decisions of Single and Multiple Worker Families," 1982.

Graham, Donald S. "Design Criteria for Pipeline Crossings: Evaluation of Current Practice and Proposed Tractive Force Numerical Model," 1981.

Reigeluth, George A. "Municipal Reform in Birmingham, England: 1873-1876," 1981.

Summers, Robert M. "The Design of Dredged Spoil Containment Basins Using Mass Sediment Properties," 1981.

Weissman, Arthur B. "Environmental Change from the Perspectives of Aesthetics and Geomorphology," 1982.

Wright, Jeffrey R. "A Multiobjective Approach to Land Acquisition," 1982.

Master's:

Parker, Donald G. "Seed Dispersal of Black Willow (*Salix nigra* Marsh)," 1981.

Pittman James J. III. "A Hydrological Study of Water-bearing Units within the Upper Potomac Group in Northern Anne Arundel County, Maryland," 1982.

Quinn, Rebecca. "Negatively Buoyant Surface Discharges," 1982.

Stenger, Cynthia. "A Palynological Study of Sediments from the Chesapeake Bay Area," 1982.

Kansas State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: 1961

DEGREES OFFERED: M.A.

GRANTED 7/1/81–6/30/82: 3

GRADUATE STUDENTS IN RESIDENCE: 15
NOT IN RESIDENCE: 5

HEAD: Stephen E. White

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor David E. Kromm, Department of Geography, Kansas State University, Manhattan, Kansas 66506
Telephone (913) 532-6727

PROGRAMS AND RESEARCH FACILITIES: Advanced work consisting of classes and seminars is offered as part of the Master of Arts curriculum. Close supervision of the thesis research, and frequent visits by geographers from other universities, help to provide a thorough and well-balanced program. The moderate size of the Geography Department makes possible an informal atmosphere and a close rapport between faculty and graduate students.

A cartographic laboratory, photographic reproduction equipment, remote sensing imagery, a collection of topographical maps for research purposes, and a reference library are all contained within the Department. The University library, with its large collection of geographical journals and the complete American Geographical Society research catalog, is nearby.

Other parts of the University offer opportunities for enrichment of the graduate student's program. Advanced study is possible in such areas as regional economic analysis, regional and community planning, natural resources management, transportation engineering, agriculture, and the South Asia Center.

The attractive university campus, rolling and tree-shaded, is located in Manhattan, a town with a population of 33,000. Just to the north of the town is the 25-square-mile Tuttle Creek reservoir and an attractive area of the Flint Hills that was considered by the Interior Department for a new national park.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on a semester system. Admission to the Graduate School ordinarily requires a "B" average in the junior and senior years plus three letters of recommendation. In some cases applicants with less than a "B" average may be admitted on a provisional basis. Six graduate teaching assistantships are available.

STAFF:

Charles Bussing, Ph.D., Nebraska, 1968, Assistant Professor—cultural, agricultural, Latin America

David E. Kromm, Ph.D., Michigan State, 1967, Professor—resource management, environmental behavior, Eastern Europe, environmental education

M. Duane Nellis, Ph.D., Oregon State, 1980, Assistant Professor—land use, remote sensing applications

Huber Self, M.S., Oklahoma State, 1947, Emeritus Professor—physical, cartography, Kansas

H. L. Seyler, Ph.D., Indiana, 1971, Associate Professor—economic-urban, regional development, quantitative methods

William R. Siddall, Ph.D., Washington, 1959, Professor—transportation, environmental quality, Anglo-America

Stephen L. Stover, Ph.D., Wisconsin, 1960, Associate Professor—agricultural, historical, Oceania

Stephen E. White, Ph.D., Kentucky, 1974, Associate Professor—population and migration, environmental perception, social

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Andrew, Dean R. "The Influence of Personal Factors on Recent Industrial Location Decisions in Kansas," 1982.

Cyr, John R. "Historic Landscapes of Cloud County, Kansas," 1981.

Moore, Robin M. "Intra-Urban Migration in the Kansas City Metropolitan Area," 1981.

University of Kansas

DEPARTMENT OF GEOGRAPHY-METEOROLOGY

DATE FOUNDED: 1947 GRADUATE PROGRAM FOUNDED: 1958

DEGREES OFFERED: M.A., M. Phil., Ph.D.

GRANTED 7/1/81–6/30/82: 5 M.A., 0 M.Phil., 5 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 32 M.A. 17 Ph.D.
NOT IN RESIDENCE: 4 M.A. 5 Ph.D.

CHAIRMAN: John P. Augelli

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Student Affairs Committee, Department of Geography-Meteorology, University of Kansas, Lawrence, Kansas 66045
Telephone (913) 864–5143

PROGRAMS AND RESEARCH FACILITIES: Departmental options for graduate programs emphasize systematic fields and selected regional coverage. Physical geography is well represented, particularly in soils, geomorphology (supplemented by work in geology), plant geography, and climatology (especially water resources, agro- and microclimatology). Well-equipped soils, vegetation, and climatological laboratories are available for research. Photo-analysis and remote sensing facilities are housed within the Department and at the Center for Research in Engineering Sciences. Within the broad scope of human and economic geography, specialization is encouraged in urban, transportation, energy policy, political and cultural ecology. Cartography retains an important position as a field of emphasis as well as a supplement to work in other facets of geography. A similar role is played by the sequence of courses and seminars on quantitative methods as applied to the various subfields of geography. Research and teaching are supported by well-equipped computational and cartographic laboratories, access to the University's computer, and the Department's extensive remote access and graphics terminal facilities.

Regional emphases, aside from elements of North American geography, are possible in Latin America, Europe-USSR, East and Southeast Asia. Opportunities for regional competence in geography are enhanced by well-developed interdisciplinary language and area programs for East Asia, Latin America, and Eastern Europe-USSR.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Admission to graduate standing requires superior academic performance at the undergraduate level and demonstrated competence in basic courses in physical, cultural, economic, quantitative methods, cartography and a regional course. Submission of GRE scores is required. The University follows the two-semester system with fifteen credit hours as the usual load. Half-time assistants are limited to a maximum of ten hours of classwork. Thesis hours, directed readings, and some course work are also offered during an eight-week summer session.

The Department offers a thesis and non-thesis track at the Master's level. The M.A. thesis program requirement is for thirty hours of graduate-level work, including the thesis. Two seminars and distribution requirements are designed to provide a core of training in regional, systematic fields, and skills. These are supplemented by courses in the student's area of interest. The non-thesis track requires thirty-six hours of graduate-level work including two research seminars. Students electing this option are not admitted to the Ph.D. program without completing a thesis in addition to the thirty-six hour requirement.

A greater degree of specialization is expected for the Ph.D. Sixty hours beyond the M.A. are required, including twenty to thirty hours of work on the dissertation. Various options are available for the language requirement, including reading knowledge of one foreign language and proficiency in a research skill related to the candidate's area of specialization.

Over three-fourths of graduate students in residence receive some financial support. Teaching and research assistantships within the Department, the Center for Research in Engineering Science, and the Center for Public Affairs constitute the major source of aid; some funds are available for the summer period. Other sources of support include Graduate School Honors Fellowships, Dissertation Fellowships, and the several categories of grants from the Office of Education, National Science Foundation, etc.

STAFF:

Robert T. Aangeenbrug, Ph.D., Wisconsin, 1965, Professor—transportation, economic, urban planning and computer graphics, Western Europe

John P. Augelli, Ph.D., Harvard, 1951, Professor and Chairman—Latin America, political, settlement

John C. Davis, Ph.D., Wyoming, 1967, Adjunct Professor—statistical methods, computer graphics

Leslie Dienes, Ph.D., Chicago, 1968, Professor—industrial, economic, Eastern Europe and the Soviet Union

Joe R. Eagleman, Ph.D., Missouri, 1963, Professor—meteorology, climatology, water and energy budgets, microclimatology

George F. Jenks, Ph.D., Syracuse, 1950, Professor—cartography, computer application to map symbolization, conservation

William C. Johnson, Ph.D., Wisconsin, 1976, Associate Professor—plant geography, physical

Walter M. Kollmorgen, Ph.D., Columbia, 1940, Emeritus Professor of Geography

A. William Kuchler, Ph.D., Munich, 1935, Emeritus Professor of Geography

Glen A. Marotz, Ph.D., Illinois, 1971, Professor—climatology, biogeography, field methods

Edward A. Martinko, Ph.D., Kansas, 1976, Adjunct Assistant Professor—applied remote sensing, ecological systems

George F. McCleary, Jr., Ph.D., Wisconsin, 1969, Associate Professor—map making and cartography

Robert W. McColl, Ph.D., Washington, 1964, Professor—political, traditional societies in transition, China and Southeast Asia

Robert E. Nunley, Ph.D., Michigan, 1958, Professor—population, quantitative methodology, Middle America

Valerie A. Preston, Ph.D., McMaster, 1978, Assistant Professor—urban/social, quantitative methods

James Shortridge, Ph.D., Kansas, 1972, Associate Professor—cultural, North America, historical

Terry A. Slocum, Ph.D., Kansas, 1980, Assistant Professor—cartography, computer mapping, information systems, quantitative methods

Thomas R. Smith, Ph.D., Columbia, 1943, Emeritus Professor of Geography

Curtis J. Sorenson, Ph.D., Wisconsin, 1973, Associate Professor—soils, physical, photo interpretation, field methods

T. H. Lee Williams, Ph.D., Bristol, 1977, Associate Professor—remote sensing, quantitative methods, physical

Robert F. Wiseman, Ph.D., Illinois, 1973, Associate Professor—economic, transportation, quantitative methods

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Chow, Larry Chuen-ho. "Changes in the Energy Economy of Thailand, Hong Kong and S. Korea, 1961-1975 and Their Implications," 1982.* Mf., Univ. Microfilms.

Fitzsimons, Dennis E. "The Role of Base Data in Map Communication," 1981.* Mf., Univ. Microfilms.

McGregor, Kent M. "Climatic Influence on Agricultural Productivity and Decision-Making in Kansas, 1951-70," 1982.* Mf., Univ. Microfilms.

Mueller, Raymond G. "Soil Genesis as Influenced by Three-Dimensional Landsurface Form in Two Low-Order Drainage Basins in the Flint Hills of Kansas," 1982.* Mf., Univ. Microfilms.

Stump, Roger William. "Changing Regional Patterns of White Protestantism in the United States, 1906-1971," 1981.* Mf., Univ. Microfilms.

Master's:

Lee, David M. "What is Geography?", 1981.

Waldorf, Susan P. "Schematic Navigational Map Design," 1981.

Warren, Melissa. "A Cartometric Analysis of 17th-Century English Sea Cnarts of the Mediterranean," 1981.

Kent State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1914 GRADUATE PROGRAM FOUNDED: 1935

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 3 M.A., 4 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 14 M.A. 16 Ph.D.
NOT IN RESIDENCE: 12 M.A. 7 Ph.D.

CHAIRMAN: Bart J. Epstein

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Brian P. Holly, Graduate Program Coordinator, Department of Geography, Kent State University, Kent, Ohio 44242
Telephone (216) 672-2045

PROGRAMS AND RESEARCH FACILITIES: The Department offers programs of study leading to Master of Arts and Doctor of Philosophy degrees. The Master of Arts degree emphasizes the acquisition of research skills and expertise in the subfields of Geography, and is planned for students expecting to pursue a professional career in industry, government or education or who intend to study for the Ph.D. degree. The Ph.D. program is designed for the student who wishes to conduct research in a specialized area of Geography. An individualized program of study is designed by the student in conjunction with an advisory committee comprised of three Geography faculty and one non-geographer from a cognate discipline. A program of coursework and independent research is planned around a proposed dissertation topic. Candidacy examinations involve both written specialties and an oral defense of the dissertation proposal.

Graduate level work can be pursued under a number of specializations including quantitative modelling, industrial, urban, behavioral, marketing, recreation, energy and water resources, geomorphology, climatology, cartography, regional economic development, cultural, Soviet Union, Eastern Europe, sub-Saharan Africa, and India.

Research facilities include a one million volume library, the University's map collection (130,000 sheets) housed in the Geography Department, a computer based information system which provides data on the location and availability of books and serials within the Ohio College Library Consortium (OCLC). On line literature searches and data bases are also available.

University computer facilities include a Burroughs 6812 and a Honeywell 66/DPS with both batch and timesharing capability. The system supports a CalComp drum plotter, advanced software and text editing systems, as well as a large self instruction center.

The Department maintains cartography, photogrammetry and computing laboratories as well as a darkroom. Specialized equipment includes Tektronix graphics terminal, hardcopy unit and digitizer, keypunch, reflecting projectors, stereoscopes, stereoplotters, headliners, transits, drafting equipment, and meteorological monitoring stations.

Situated in urbanized northeastern Ohio, the University has ready access to a variety of research environments: large cities, small towns, agricultural regions and the Appalachian Highlands.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Kent State University operates on a semester system.

All applicants for admission to the M.A. and Ph.D. programs must meet the requirements of the Graduate College and the Department. A minimum grade point average of 2.75 on a 4.0 scale or its equivalent is required for regular admission. Applicants must have the equivalent of either Kent State's B.A. degree in Geography (for M.A. program) or M.A. in Geography (for Ph.D. program). Any deficiencies can be made up after admission. A minimum of thirty-two hours of credit are required for the M.A. degree. Sixty semester hours beyond the Master's degree are required for the Ph.D., with thirty of these credits assigned to the dissertation.

Applications are encouraged from qualified students representing all minority groups, the physically disabled, and women.

Financial aid is available in the form of Graduate Assistantships valued at $3600 for M.A. students and $4600 for Ph.D. students, Doctoral Teaching Fellowships at $4900 and University Fellowships (non-service) at $4000 per academic year. Research Assistantships from funded research projects are sometimes available. All appointments provide a partial fee remission of $934 per academic year. All appointees are classified as Ohio residents for fee purposes. Financial aid is not normally available during the summer.

STAFF:

Surinder M. Bhardwaj, Ph.D., Minnesota, 1970, Professor—cultural, India

Erich F. Bordne, Ph.D., Syracuse, 1954, Professor—climatology, water resources, conservation, North America, Western Europe

Bart J. Epstein, Ph.D., Clark, 1956, Professor and Chairman—urban, marketing, urban field studies, applied, land use planning

Frank A. Erickson, Ph.D., Illinois, 1973, Assistant Professor—resources, Latin America, rural field studies

Milton E. Harvey, Ph.D., Durham (U.K.), 1966, Professor—regional analysis, behavioral, recreation, methodology

Jordan A. Hodgkins, Ph.D., Syracuse, 1959, Professor of Soviet Geography—economic, natural resources, energy resources, U.S.S.R. and Eastern Europe

Brian P. Holly, Ph.D., Michigan State, 1974, Associate Professor—urban, industrial, economic,computer cartography

Richard T. Lewis, Ph.D., Syracuse, 1970, Assistant Professor—historical, urban, economic, United States

Hallock F. Raup, Ph.D., UC, Berkeley, 1935, Emeritus Professor—cultural, historical toponymy, Anglo-America

James A. Rinier, M.A., Kent State, 1950, Professor—physical, soils, conservation, North America, Western Europe, rural field studies

Alan J. Woods, Ph.D., UCLA, 1978, Assistant Professor—physical, coastal, air photo interpretation, cartography

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Aggarwal, Surinder K. "The Geographic Dimensions of Malnutrition in Haryana, India," 1981.* Mf., Univ. Microfilms.

Benson, Virginia M. "Food Shopping Opportunities: A Comparison of the Urban and Suburban Systems with Special Reference to the Elderly," 1981.* Mf., Univ. Microfilms.

Davgun, Satish. "Health Care Utilization of the Elderly: A Spatial Appraisal," 1982.* Mf., Univ. Microfilms.

Salling, Mark J. "Poverty and the Decision to Move: A Spatio-Cognitive Approach to the Analysis of Strategies for Housing the Poor," 1982.* Mf., Univ. Microfilms.

Master's:

DiGiammerino, David A. "The Structure, Nature and Typologies of River Recreation Systems," 1981.

Russell, Thomas E. "Effects of Urbanization on the Attitudes of Landowners Concerning Rural Development," 1981.

University of Kentucky

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1944 GRADUATE PROGRAM FOUNDED: 1946

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 1 M.A., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 11 M.A. 9 Ph.D.
NOT IN RESIDENCE: 5 M.A. 3 Ph.D.

CHAIRMAN: Stanley D. Brunn

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Karl B. Raitz,
Director of Graduate Studies, Department of Geography, University of Kentucky,
Lexington, Kentucky 40506
Telephone (606) 258-2931 or 257-1112

PROGRAMS AND RESEARCH FACILITIES: The Department offers a flexible approach to graduate education in geography. Except for core courses on concepts in geography, research design, quantitative methods, and the development of geographic thought, each graduate student has the responsibility to formulate his/her own program of study and research. Graduate advisors approve each student's research interests and academic goals. Fields of concentration include:

CULTURAL GEOGRAPHY OF THE UNITED STATES - Urban and rural settlement patterns and processes, past and present; distribution and interaction of ethnic groups.

GEOGRAPHIC ANALYSIS - Computer modelling, computer cartography; locational analysis; diffusion simulation; geographic information systems; normative models.

GEOGRAPHY OF THE THIRD WORLD - Problems of development in Africa, Latin America, South Asia, and especially Southeast Asia; topics include population, urbanization, industrial development, transportation, political-social issues, and economic growth.

INDUSTRIAL GEOGRAPHY - Location theory; nonmetropolitan industrialization; industrial development; spatial analysis of manufacturing systems.

MEDICAL GEOGRAPHY - Health care delivery; space, time, and illness behavior; epidemiology; disease ecology.

POLITICAL GEOGRAPHY - Viability of political units; political development; economic interdependence; electoral geography; governmental policy; organization of space.

POPULATION GEOGRAPHY - Dynamics of population growth and change; internal migration.

REGIONAL DEVELOPMENT - Economic, social, and political problems within developed countries especially Appalachia and the southeastern United States.

SOCIAL GEOGRAPHY - Ethnic and minority groups; aging; welfare issues; social

impact assessment; environmental perception; technological hazards.
TRANSPORTATION GEOGRAPHY - Influence of transport systems on human activity; route locations; network flows; regulation impact; commuting behavior.
URBAN GEOGRAPHY - Basic principles and theories of urban systems; social geography of the city; geographies of growth.

Department offices and the newly equipped and staffed Cartographic Laboratory are on the fourteenth floor of the modern Patterson Office Tower. The University Library and Computing Center (IBM 370) are excellent research facilities. The M.I. King Library has a special Appalachian collection of the papers of the prominent Kentucky geographer, Ellen Churchill Semple, and a separate Map Department. Related research facilities available on campus include an Appalachian Center, a Center of Gerontology, an Institute for Mining and Mineral Research, and a Tobacco and Health Research Institute. The University also is a sponsor of the Oak Ridge Associate Universities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The academic year consists of two semesters and two summer sessions. An undergraduate grade-point average of 3.0 (A = 4.0) and a combined GRE score of 1000 are desirable for admission to the Master's Program. A grade-point average of 3.50 in graduate work and a combined GRE score of 1200 are desirable for admission to the Ph.D. program. GRE scores should be submitted with application materials. Prospective students should submit two official transcripts of all previous college work and a written application at least two months before anticipated entrance. The department offers a number of teaching assistantships with stipends of about $420 per month for the academic year. Applications for fellowships must be submitted on official forms not later than February 1; assistantship applications must be submitted not later than March 1.

STAFF:

W. A. Bladen, Ph.D., Kentucky, 1972, Associate Professor—political, regional planning, Appalachia

Stanley D. Brunn, Ph.D., Ohio State, 1966, Professor and Chairman—social, political, urban, futures

Robert G. Cromley, Ph.D., Ohio State, 1978, Assistant Professor—locational analysis, industrial, transportation, quantitative methods, computer cartography

George F. Hepner, Ph.D., Arizona State, 1979, Assistant Professor—land use analysis, environmental problems, quantitative modelling

P. P. Karan, Ph.D., Indiana, 1956, Professor—urban and regional planning, political and economic, research methods, Central and South Asia

Thomas R. Leinbach, Ph.D., Pennsylvania State, 1971, Professor—transportation, industrial, regional development, quantitative methods, Southeast Asia

Susan M. Macey, Ph.D., Illinois, 1982, Visiting Assistant Professor—social, behavioral, urban, natural hazards, energy

Gyula Pauer, M.A., Kentucky, 1975, Cartographic Laboratory Director—thematic maps, production cartography, East Europe

Karl B. Raitz, Ph.D., Minnesota, 1970, Professor and Director of Graduate Studies—cultural, settlement, ethnic, field methods, U.S. and Canada, Appalachia

Gary W. Shannon, Ph.D., Michigan, 1970, Professor—medical, urban, social

Susan Trussler, Ph.D. candidate, Pennsylvania State, Visiting Instructor—economic, transportation, quantitative land use

Richard Ulack, Ph.D., Pennsylvania State, 1972, Associate Professor—population, migration, economic development, Southeast Asia, Appalachia

W. A. Withington, Ph.D., Northwestern, 1955, Associate Professor—cultural, urban development, Southeast Asia, Kentucky

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Brown, Pa[illegible] "The Relationships of Ethnic Status to Decisions of Residential Relocation by Older Citizens," 1982.

Misallati, Abdalla Salem. "Tripoli: Structure and Functions of an Arab City," 1982.

Master's:

Haven, Roberta. "Trends in Commuting and the Diffusion of Growth in the Intermetropolitan Periphery of Western Kentucky," 1982.

Louisiana State University

DEPARTMENT OF GEOGRAPHY AND ANTHROPOLOGY

DATE FOUNDED: 1928   GRADUATE PROGRAM FOUNDED: 1933

DEGREES OFFERED: M.A., M.S. in both Geography and Anthropology, Ph.D. in Geography

GRANTED 7/1/81-6/30/82: 6 Masters, 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 42 M.A. 18 Ph.D.
NOT IN RESIDENCE: 6 M.A. 4 Ph.D.

CHAIRMAN: Milton B. Newton, Jr.

FOR CATALOG AND FURTHER INFORMATION WRITE TO: M.E. Richardson, Graduate Coordinator, Department of Geography and Anthropology, Louisiana State University, Baton Rouge, Louisiana 70803
Telephone (504) 388-5942, 5943, 5944

PROGRAMS AND RESEARCH FACILITIES: Departmental emphases are cultural-historical geography and physical geography. In cultural-historical geography, attention is directed toward settlement, agricultural, and historical geography and cultural ecology in the southern United States, the tropics, and in Latin America.

The combination of geography and anthropology in a single department provides the student of the cultural landscape with a unique opportunity to select methods from each discipline.

In physical geography, attention is directed toward alluvial and coastal morphology, water-budget climatology, and closely related aspects of vegetation and soils. Regional emphases include the southern United States, the tropics, Latin America, and the Arctic. Close working ties connect the interested student with the Department of Geology, the Coastal Studies Institute, and the Center for Wetland Resources.

Research techniques are vital to the training in both the cultural and physical curricula, and courses in aerial photography, remote sensing, cartography, computer cartography, and statistics are offered. Fieldwork is especially encouraged and several trips are planned. Research by faculty and graduate students is underway in each Central American country, Mexico, Peru, West Africa, India, Pakistan, Korea, Malaysia, France, Japan, China, and throughout the Southern U.S.

The 1.9 million volume library is especially strong in geography and anthropology with an outstanding journal collection. Aerial photo collections include coverage of Louisiana, Mexico, and parts of southeast Asia. Facilities for cartographic and aerial photo, and remote sensing interpretation, laboratories for sediment analysis, biogeography, and palynology, and an up-to-date computer graphics center with terminals in the department are available.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Selection is based on compatibility of interests with departmental programs; on grades, letters of recommendation, and Graduate Record Examination scores. The LSU Graduate School requires an undergraduate grade point average of at least 2.5, plus acceptable GRE scores. An applicant for financial aid should have a GPA of at least 3.0 and a GRE of at least 1000.

Graduate Assistantships start at $4200 for nine months and include the waiver of tuition (including nonresident fee), except for $75 per semester University fee and $25 transportation fee per semester. Research Assistantships are occasionally available to the highly qualified student. Grants for student field work are available through the Robert C. West Field Research Fund.

FULL-TIME STAFF:

Nigel J. R. Allan, Ph.D., Syracuse, 1978, Assistant Professor—biocultural geography, South and Southwest Asia

Jill Brody, Ph.D., Washington, 1982, Assistant Professor—linguistics, anthropology, Maya region

Roland E. Chardon, Ph.D., Minnesota, 1961, Professor—cultural, Latin America

William V. Davidson, Ph.D., Wisconsin-Milwaukee, 1972, Associate Professor—cultural, historical, Caribbean, Central America

Jay D. Edwards, Ph.D., Tulane, 1970, Associate Professor—anthropology, Latin America

Sharon I. Goad, Ph.D., Georgia, 1978, Assistant Professor—archaeology, southeastern Indians

Sam B. Hilliard, Ph.D., Wisconsin, 1966, Alumni Professor—historical, agricultural, Anglo-America

Richard H. Kesel, Ph.D., Maryland, 1971, Professor—geomorphology, soils, biogeography

Philip B. Larimore, M.S., Virginia, 1954, Assistant Professor—cartography

Stephan W. Miller, M.S., Florida, 1976, Assistant Professor—geography, geographical information systems, computer cartography

Robert A. Muller, Ph.D., Syracuse, 1962, Professor—climatology, hydrology, North America

Robert W. Neuman, M.A., Louisiana State, 1956, Assistant Professor and Curator of Anthropology—archaeology, prehistoric ecology, Southeastern United States

Milton B. Newton, Jr., Ph.D., Louisiana State, 1967, Professor—cultural, prehistoric settlement, Louisiana, U.S. Southeast

Douglas W. Owsley, Ph.D., Tennessee, 1978, Assistant Professor—physical anthropology, paleodemography

Miles R. Richardson, Ph.D., Tulane, 1965, Professor—material culture and behavior, Spanish America

Donald E. Vermeer, Ph.D., UC, Berkeley, 1964, Professor—cultural, physical, Africa

H. J. Walker, Ph.D., Louisiana State, 1960, Boyd Professor—alluvial and coastal morphology, geomorphology, Arctic

Frederick M. Wiseman, Ph.D., Arizona, 1978, Assistant Professor—biogeography, Quaternary paleoecology, Middle America

A position in remote sensing to be filled.

PART-TIME STAFF:

Ernest S. Easterly III, Ph.D., Louisiana State, 1980, Salzburg, 1981, Adjunct Assistant Professor—geography, political resources, law of the sea

Marjorie R. Esman, Ph.D., Tulane, 1981, Adjunct Assistant Professor—anthropology, ethnic identity, Cajun Louisiana

William G. Haag, Ph.D., Michigan, 1948, Alumni Professor Emeritus—ethnology, archaeology, West Indies

Fred B. Kniffen, Ph.D., UC, Berkeley, 1930, Boyd Professor Emeritus—cultural, ethnology, Louisiana, Eastern U.S.

William G. McIntire, Ph.D., Louisiana State, 1954, Professor Emeritus—geomorphology, archaeology, coastal environments

Charles E. Pearson, Ph.D., Georgia, 1979, Adjunct Assistant Professor—archaeology, southeast

Malcolm K. Shuman, Ph.D., Tulane, 1974, Adjunct Assistant Professor—anthropology, Central America, Louisiana

Robert C. West, Ph.D., UC, Berkeley, 1946, Boyd Professor Emeritus—cultural, historical, ethnology, Latin America

Mankato State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1953 GRADUATE PROGRAM FOUNDED: 1953

DEGREES OFFERED: M.S., M.A.

GRANTED 7/1/81-6/30/82: 3

GRADUATE STUDENTS IN RESIDENCE: 4
NOT IN RESIDENCE: 8

CHAIRMAN: Philip S. Kelley

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Department of Geography, Mankato State University, Mankato, Minnesota 56001
Telephone (507) 389-2617

PROGRAMS AND RESEARCH FACILITIES: The department stresses broad preparation for advanced graduate work, preparation for teaching at various levels, and careers in applied geography. Major strengths are in urban and regional planning and in techniques. The M.A. requires a language or statistical skill, plus a thesis or internship; the M.S. also permits an alternate paper. The department maintains a small book and map library, a well-equipped cartography laboratory (including an Apple II microcomputer, Numonics digitizer, a process camera and complete darkroom facilities) and a wide variety of field and laboratory equipment. A UNIVAC 1100/80 Computer is readily available for graduate student and faculty use; graphics support includes a Tektronix terminal, a Complot DP-1 drum plotter, and a growing library of applications software. The University library has most of the major U.S. geographic journals and is a depository of the U.S. Government and the United Nations. The University library has a substantial map collection and is an AMS and USGS depository.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Students must fulfill the requirements for admission to the Graduate College and be admitted by the department for the degree program desired. Students may enroll at the start of any quarter or summer session. The department has a limited number of graduate assistantships.

FACULTY:

Lawrence C. Anderson, Ed.D., Idaho, 1968, Professor—geographic education, agriculture, polar lands

Darrell F. Apitz, M.S., Mankato State, 1963, Assistant Professor—physical, regional

Branko Colakovic, Ph.D., Minnesota, 1970, Associate Professor—Eastern Europe, cultural, urban

Mary T. Dooley, Ph.D., Michigan State, 1975, Professor—historical, Anglo-America

William W. Girard, Ph.D., Iowa, 1976, Associate Professor—geomorphology, quantitative techniques

James F. Goff, Ph.D., Illinois, 1970, Professor—political, Soviet Union, military

Philip S. Kelley, Ph.D., Washington, 1977, Associate Professor and Chairman—cartography, image interpretation, environmental quality, computer techniques

Miriam Kui Kiaw Lo, Ph.D., Western Ontario, 1973, Associate Professor—cultural, economic development

Donald Roscoe, M.S., Mankato State, 1966, M.S., Houston, 1968, Assistant Professor—earth science education, physical

George Stoops, M.S., AIP, Illinois, 1968, Associate Professor—urban and regional planning

David L. Thurston, M.S., Chicago, 1964, Associate Professor—manufacturing, recreation, quantitative techniques

Perry S. Wood, Ph.D., Nebraska, 1973, Professor—urban, field methods

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Hagen, Thomas. "Feudalistic Tendencies in Post-Mao China," 1982.

Nelson, Randy. "Motive Factors in the Design of Computer-Assisted Thematic Mapping Systems for Geographic Research," 1982.

Turnblad, William. "Candia, Minnesota: A Mobility Study of Swedish Immigrants," 1982.

University of Maryland

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1941 GRADUATE PROGRAM FOUNDED: 1941

DEGREES OFFERED: M.A., Ph.D. in Geography; M.A. in Urban Studies; M.C.P. (UMAB)

GRANTED 7/1/81–6/30/82: 3 M.A., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 31 M.A. 14 Ph.D.
NOT IN RESIDENCE: 2 M.A. 2 Ph.D.

CHAIRMAN: Kenneth E. Corey

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Director of Graduate Records, Room 2125, South Administration Building; for further geography information write to: Director of Graduate Studies, Department of Geography, 1113 Lefrak Hall, University of Maryland, College Park, Maryland 20742
Telephone (301) 454–2241

PROGRAMS AND RESEARCH FACILITIES: The graduate programs, especially the Ph.D. program, provide individual specialization. Graduate studies are encouraged in applied locational/spatial research and planning/policy research, as well as in basic research. Recently there has been significant new faculty recruitment in support of the department's increasing emphases on professional geographic careers and practical geographic methods. These new directions recognize the growing need for the utilization of geographic knowledge in understanding and prospering in a post-industrial era. Specific departmental graduate specialities include the following:

ENVIRONMENTAL ANALYSIS AND MANAGEMENT: physical geography and environmental policy issues, including active faculty interests in water resources planning, energy policy analysis, consumer energy patterns, process geomorphology, morphometric analysis, coastal environments, microclimatology, synoptic climatology, and resource use. Recently, the Chesapeake Bay and Maryland's natural environments have been a principal focus of graduate student and faculty research.

CARTOGRAPHY AND MAPPING APPLICATIONS: cartographic design and application are stressed; studies leading to professional careers in cartography and related specialties. These include cartographic communication, transformations and projections, computer-assisted cartography, geographic information systems, maps for the blind, and remote sensing.

METROPOLITAN ANALYSIS AND PLANNING: the post-industrial transactional metropolis; internal metropolitan structure and interrelationships; planning, management, and development processes, both organizational and regional; some comparative and international urbanization and settlement processes; urban historical; and selected urban functions—transportation, population, economic, and policy systems. These studies are supported by the Department's Institute for Urban Studies, and the extensive metropolitan and planning faculties of the University of Maryland campuses.

HUMAN GEOGRAPHY: colonization processes; tropical areas; health and disease; cultural processes; broad interdisciplinary approach is encouraged.

REGIONAL: specialization is possible in several areas (see staff listings).

The Department has an outstanding location for the pursuit of geographical studies; our graduate students are encouraged to exploit this potential. The University of Maryland is eight miles (20 min.) from the incomparable library and research facilities of Washington, D.C. Its location in the Baltimore-Washington urban region provides students with the opportunity to examine at first hand the southern portion of Megalopolis, while the proximity of the Appalachians, the Piedmont and the Coastal Plain with the Chesapeake Bay offers additional research challenges. The Department's new quarters include separate teaching and research labs for physical geography and cartography, complete darkroom facilities, and a self-instruction laboratory.

The Department's Computer Mapping Laboratory is supported by a dedicated PRIME 550 minicomputer and the University's UNIVAC mainframe and IBM midicomputers; computer graphics terminals include Tektronix 4014, two Tektronix 4025 raster terminals, one with graphics memory, and a stand-alone Tektronix 4051, a BASIC programmable graphics terminal with cartridge tape input. Output devices include a Tektronix interactive digital plotter and a Tektronix hand-copy unit. Data capture is achieved by two Tektronix digitizing tablets and an ALTEK backlighted

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table. Ancillary video projection equipment enables computer-generated displays to be demonstrated before large groups. Adjacent to the Department is a computer terminal classroom, with fourteen terminals and closed-circuit TV, that is designed for human/machine simulations.

The Department publishes an *Occasional Paper Series;* the series has included *The Atlas of Maryland*. Dr. Robert D. Mitchell is Editor for the Americas, *Journal of Historical Geography*.

The University's Institute for Urban Studies is a program of the Department of Geography. The Institute offers a program leading to the Master of Arts degree in Urban Studies; for admission and financial aid materials write Urban Studies, Director of Graduate Studies, c/o 1113 Lefrak Hall, University of Maryland, College Park, Maryland 20742; telephone (301) 454-5195, 5718. The program is interdisciplinary and professionally oriented to educate students in metropolitan-area careers through the use of generic planning and management methods. A graduate of the program would be prepared to enter practice in metropolitan organizations from the non-profit, voluntary, profit, and governmental sectors relating to urban affairs. The Institute's faculty specialize in metropolitan and regional planning, public policy analysis and management, quantitative planning methods, and economic-development planning. Internships are encouraged; career-oriented management and planning competencies are stressed. The Institute has a joint program with the professional American Planning Association-recognized Master of Community Planning Program, University of Maryland, Baltimore City Campus (UMAB); for more information, contact Dr. Melvin Levin, c/o 525 West Redwood Street, UMAB, Baltimore, Maryland 21201; (301) 528-3600.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester. Admission (M.A. and Ph.D.): B (3.0) average, strong Graduate Record Examination scores (verbal and mathematical), and three letters of recommendation. It is *essential* that Ph.D. student applicants provide a complete and focused statement of study objectives and specialization together with specific research plans; this statement is important; it is used to assign two initial faculty sponsors to prospective doctoral students. Graduate Assistantships currently provide a 10-month stipend of $5685 for new graduate students and additional stipend steps for advanced Master's and Ph.D. students plus remission of tuition and are renewable. Various competitive university fellowships and grant-supported assistantships sometimes are available.

GEOGRAPHY STAFF:

Harold Brodsky, Ph.D., Washington, 1966, Associate Professor—economic, quantitative (on leave 1982-83)

Antonio F. Chaves, Ph.D., Havana, 1946, Associate Professor—hispanic world, political, historical

Charles M. Christian, Ph.D., Illinois, 1975, Associate Professor (joint appointment with Urban Studies)—urban social policy, minorities in public service, demography (on leave 1982-83)

Joseph Cirrincione, Ph.D., Ohio State. 1970, Associate Professor (joint appointment with Secondary Education) and Director of Undergraduate Studies—geography in education

Kenneth E. Corey, AICP, Ph.D., Cincinnati, 1969, Professor and Chairman (joint appointment in planning) and Director, Institute for Urban Studies—planned organizational change, metropolitan planning, neighborhood grantsmanship

L. Schuyler Fonaroff, Ph.D., Johns Hopkins, 1961, Professor and Director, Graduate Studies—cultural, medical, biogeography

Paul A. Groves, Ph.D., UC, Berkeley, 1969, Associate Professor—urban, historical metropolitan structure, ethnic groups in cities

Robert A. Harper, Ph.D., Chicago, 1950, Professor—urban systems in modern societies, geography in education

Michael S. Kearney, Ph.D., Western Ontario, 1981, Assistant Professor—environmental geomorphology, soils, remote sensing

Aharon Kellerman, Ph.D., Boston, 1976, Visiting Lecturer—location theory, behavioral, economic, Israel

Poh-Chin Lai, Ph.D. candidate, Waterloo, Lecturer—computer-assisted cartography, cartographic communication, quantitative

Stephen P. Leatherman, Ph.D., Virginia, 1976, Assistant Professor—coastal geomorphology, remote sensing, coastal resource management, quantitative geomorphology

Robert D. Mitchell, Ph.D., Wisconsin, 1969, Associate Professor—historical, cultural, European overseas colonization

Donald Petzold, Ph.D., McGill, 1980, Assistant Professor—climatology, microclimatology, high latitude climatology

Stephen W. Sawyer, Ph.D., Clark, 1980, Assistant Professor—energy, environmental policy, pollution, water resources planning

Rita Schneider, Ph.D. candidate, Ohio State, Lecturer—development (Africa and Latin America), social/population, economic

Derek Thompson, Ph.D., Indiana, 1966, Associate Professor—transportation, locational analysis of urban and regional systems, population migration, geographic information systems

Joseph W. Wiedel, M.A., Maryland, 1963, Associate Professor—cartography, maps for the blind

AFFILIATE AND ADJUNCT GEOGRAPHY STAFF:

Frederick R. Broome, M.A., Georgia, 1966, Lecturer—computer-assisted cartography

Thomas M. Corsi, Ph.D., Wisconsin-Milwaukee, 1976, Associate Professor of Transportation, College of Business Administration and Management—transportation (affiliate)

Walter W. Deshler, Ph.D., Maryland, 1957, Visiting Professor—remote sensing, Africa

Dixie Ann Pemberton, Ph.D., Kansas, 1970, Research Associate Professor, Center for Environmental and Estuarine Studies—environment, education (affiliate)

URBAN STUDIES STAFF:

Marie Howland, Ph.D., Massachusetts Institute of Technology, 1981, Assistant Professor—employment, urban and regional economic planning, capital markets

Hyun-Sik Kim, Ph.D., Princeton, 1981, Assistant Professor—housing market analysis and finance, quantitative analysis and computer application in urban affairs, environmental planning, developing countries, East Asia

Charles D. Laidlaw, Ph.D., Pennsylvania, 1968, Visiting Associate Professor—metropolitan regional planning, modeling, computer applications, and quantitative, urban economics

Vincent L. Marando, Ph.D., Michigan State, 1967, Professor—urban public policy, public management, and intergovernmental relations

Barbara W. Williams, M.P.A., American, 1976, Lecturer, Assistant to the Director and Director of Graduate Studies—management, personnel administration, internships

AFFILIATE AND ADJUNCT URBAN STUDIES STAFF:

Howell R. Baum, Ph.D., UC, Berkeley, 1974, Associate Professor—social planning, planning theory (affiliate)

Sidney N. Brower, AICP, M.C.P., Massachusetts Institute of Technology, 1964, Associate Professor—physical environment and human behavior, infrastructure and facilities planning, planning practice, neighborhood planning (affiliate)

Patricia S. Florestano, Ph.D., Maryland, 1974, Director, Institute for Governmental Services—urban affairs and public administration, coastal zone management (affiliate)

David P. Fogle, AICP, M.R.C.P., UC, Berkeley, 1957, Associate Professor—historic preservation planning, urban form, urban planning, planning studio (affiliate)

Robert W. Janes, Ph.D., Illinois-Urbana, 1942, Professor—urban sociology, research methods, community indicators

Melvin B. Levin, AICP, Ph.D., Chicago, 1956, Professor and Director, UMAB Community Planning Program—public policy, planning administration, state and regional planning, research, planning practice, manpower planning (affiliate)

John C. Murphy, L.L.B., New York University, 1965, Lecturer—urban and planning law

Clarence M. Stone, Ph.D., Duke, 1963, Professor—urban politics, American government

David B. Walker, Ph.D., Boston, 1956, Assistant Director, Advisory Commission on Intergovernmental Relations—intergovernmental relations, regional planning

TITLES OF GEOGRAPHY THESES AND DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Keyes, Dale L. "An Empirical Study of the Patterns and Causes of Atmospheric Nitrogen Dioxide in Urban Areas," 1981.

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Krakover, Shaul. "Spread of Growth in Urban Fields, Eastern United States, 1962-1978," 1982.

Master's:

Catita, Ana C. "The Occurrence of Manufacturing Firms in Relation to the Size of the Metropolitan Areas: United States Metropolitan Areas, 1963," 1982.

Friedlander, Susan Claire. "State Energy Policy Adoption: Energy-Specific or Innovation-as-Usual," 1981.

Gampel, Joanne C. "Spatial Diffusion of Marijuana Use in America," 1981.

University of Massachusetts (Amherst)

DEPARTMENT OF GEOLOGY AND GEOGRAPHY

DATE FOUNDED: 1967 GRADUATE PROGRAM FOUNDED: 1980

DEGREES OFFERED: M.S.

GRANTED 7/1/81–6/30/82: 0

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 1

CHAIRPERSON: George E. McGill

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. James A. Hafner, Department of Geology and Geography, University of Massachusetts, Amherst, Massachusetts 01003
Telephone (413) 545–2286, 2296, 0778

PROGRAM AND RESEARCH FACILITIES: The department has a strong general program in graduate training and research leading to the M.S. degree in geography. The geography program has special strengths in Urban and Regional Geography, Climatology and Paleoclimatic Studies, Land and Water Resource Management, Rural Economic Development, Migration, Environmental Perception, and Cartography. Special problems in these areas may be explored in the regional context of North America, New England, Western Europe, Latin America, East and Southeast Asia, and the Arctic.

The department has facilities for cartographic design and photographic cartography, and computer terminals to the University Computing Center. The impending formation of a Regional Remote Sensing Center at the University will provide access to a full range of digital and visual data display and analytical processes for satellite imagery. Close cooperation is maintained with allied programs in regional planning, geology, anthropology, Five College Latin American and Asian Studies Programs, the National Park Service Cooperative Unit, and the Water Resources Research Center.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. A minimum cumulative average of 2.75 (4 point system) or equivalent is required. Deadlines for applications are March 1 for the fall semester and October 1 for the spring semester. Thesis or non-thesis tracks are available. Teaching assistantships are awarded on a competitive basis subject to availability and carry a waiver of tuition fees. Full- and half-time research assistantships are also available.

STAFF:

David Alexander, Ph.D., London, 1977, Assistant Professor—fluvial geomorphology, environmental hazards, quantitative methods

Raymond S. Bradley, Ph.D., Colorado, 1974, Associate Professor—paleoclimatology, climatology, Arctic regions, western United States

Terence Burke, Ph.D., Birmingham, 1967, Professor and Associate to the Chancellor—economic and political geography, Western Europe

James A. Hafner, Ph.D., Michigan, 1970, Associate Professor—agricultural systems, developing areas, population, Southeast Asia

E. Bruce MacDougall, Ph.D., Toronto, 1967, Associate Professor—regional planning, land resource inventory, remote sensing

William D. McCoy, Ph.D., Colorado, 1981, Assistant Professor—geomorphology, Quaternary stratigraphy, amino-acid geochronology

Allen R. McNeill, Ph.D. candidate, Illinois, Visiting Lecturer—physical geography, recreation, Australasia, Oceania

Rutherford H. Platt, J. D., Chicago, 1967; Ph.D., Chicago, 1971, Associate Professor—land and water resource management, planning law

Rebecca Smith, Ph.D., Minnesota, 1982, Assistant Professor—urban geography, social geography

Richard W. Wilkie, Ph.D., Washington, 1967, Professor—migration, cartography, environmental perception, Latin America

Lan-Sheng Zhang, Visiting Professor (Beijing Normal University, People's Republic of China)—climatology, physical geography of China

GEOLOGY FACULTY:

Joseph H. Hartshorn, Ph.D., Harvard, 1955, Professor—glacial geomorphology, Arctic and New England

Richard F. Yuretich, Ph.D., Princeton, 1976, Assistant Professor—environmental geochemistry, East African lake environments

Memphis State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1926 GRADUATE PROGRAM FOUNDED: 1952

DEGREES OFFERED: M.A., M.S.

GRANTED 7/1/81–6/30/82: 1

GRADUATE STUDENTS IN RESIDENCE: 11
NOT IN RESIDENCE: 5

CHAIRMAN: W. Theodore Mealor, Jr.

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Advisor, Department of Geography, Memphis State University, Memphis, Tennessee 38152
Telephone (901) 454–2386

PROGRAMS AND RESEARCH FACILITIES: The goal of the geography master's program is to provide students with a sound education in the fundamentals and applications of geographic research as preparation for work or for further education. The program assures breadth within the discipline yet is flexible enough to allow the student to place emphasis upon one of the following: (1) environment and earth sciences (atmosphere, landforms, and water resources); (2) human-economic spatial systems (land use, industrial location, urban-rural systems); and (3) geographic techniques (cartography, map production, computer mapping, and remote sensing). A minimum of 30 hours (thesis) or 33 hours (non-thesis), designed by the student in consultation with an advisor, is required. Corollary areas of study in other departments are available to support the major interests.

The location of the University in a large urban area, yet in the heart of one of the nation's leading agricultural regions, and within a half-day's drive of five physiographic provinces, provides an ideal workshop for a variety of environmental and cultural topics. Departmental facilities insure ample space for student offices and research activities. The Department maintains a weather station, a graphics terminal, digitizer and plotter, micro-computers (for graphics and basic image processing), a copy camera, and a variety of other cartographic and remote sensing equipment that support not only academic and research endeavors but also the activities of the Cartographic Services Laboratory.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University is on the semester system. Acceptance by the University Graduate School is prerequisite to admission by the Department. The Graduate School requires applicants to submit transcripts of all college grades and to present satisfactory scores on either the Graduate Record Examination or the Miller Analogies Test. Three letters of recommendation are required by the Department for all students seeking financial aid.

Financial aid in the form of teaching and research assistantships are available. Teaching assistants normally conduct introductory physical geography laboratories or assist in the human-economic and cartography courses. Stipends provide a minimum of $4,000 for eight months and carry exemption from out-of-state tuition fees. Internships are occasionally available as are funds from contracts and grants.

STAFF:

Melvin C. Barber, Ph.D., Southern Illinois, 1971, Associate Professor—marketing, urban analysis, industrial location, U.S. South

John H. Corbet, Ph.D., Florida, 1966, Associate Professor—geomorphology, hazards, U.S.S.R.

Howard E. Frye, M.A., Michigan, 1954, Assistant Professor—Europe, Anglo-America

Hsiang-te Kung, Ph.D., Tennessee, 1980, Assistant Professor—water resources, geomorphology, urban environment, Asia

John T. Matson, Ph.D., Ohio State, 1979, Assistant Professor—behavioral, urban, computer applications, quantitative

W. Theodore Mealor, Jr., Ph.D., Georgia, 1972, Professor and Chairman—economic, land use, aerial photo interpretation, remote sensing

L. Arnold Siniard, M.A., Memphis State, 1964, Assistant Professor—resource management, agriculture

John A. Sobol, Ph.D., Michigan, 1961, Professor—atmosphere, cartography, Latin America

Charles T. Traylor, Ph.D., Kansas, 1979, Associate Professor and Director, Cartographic Services Laboratory—cartography, remote sensing, computer mapping

Miami University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1906 GRADUATE PROGRAM FOUNDED: 1929

DEGREES OFFERED: M.A., M.A. in Teaching

GRANTED 7/1/81–6/30/82: 4

GRADUATE STUDENTS IN RESIDENCE: 9
NOT IN RESIDENCE: 4

CHAIR: John L. Thompson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: John C. Klink, Department of Geography, 216 Shideler Hall, Miami University, Oxford, Ohio 45056
Telephone (513) 529–4728

PROGRAMS AND RESEARCH FACILITIES: The M.A. program is a broadly conceived professional curriculum for students intending to pursue work in geography beyond the master's degree or to enter directly into local and federal government or industrial employment. The department operates in the belief that the M.A. degree should further broaden the student's geographical background, but the program is sufficiently flexible to allow for strengthening his systematic or regional interest. Areas of emphasis include Urban Analysis and Physical-Environmental Analysis. The M.A. with a thesis or practicum requires a minimum of 36 hours including 30 hours of course work. An all course work option is available and requires completion of 45 credit hours. The University provides corollary strengths in the social sciences and languages for students with urban, political, European, and Latin American interests.

The M.A.T. program requiring 36 hours of course work is designed for students certified to teach and intending to pursue a school teaching career.

The department occupies new facilities which include a cartographic-air photo laboratory with capabilities for inking, scribing, and computer-assisted drawing of maps; a data processing center equipped with a digitizer, printer, graphics computer terminal, and a digital image analysis system; soil lab equipment; and a microclimatology/precipitation chemistry station at the Ecology Research Center. Other valuable University resources include the Audio-Visual Service, a map library, two IBM 370-148 computers, two HP 3000 computers, Calcomp plotter, and the Scripps Foundation and Gerontology Center.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* Semester System. *Admission Requirements:* Bachelor's degree from an accredited college or university; cumulative minimum grade point average of 2.5 (of a possible 4.0); departmental approval. *Financial Aid:* Graduate Assistantships: Stipends range from $3,850 to $4,150 for the nine-month academic year plus remission of out-of-state tuition and instruction fee. Each assistant is eligible for two $500 Graduate Summer Fellowships, each with a stipend of $500 plus remission of out-of-state tuition and instruction fee. *Grants-in-aid:* Tuition.

STAFF:

Robert S. Bacon, Ph.D. (Psychology), Nebraska, 1955, Ph.D. (Geography), Colorado, 1975, Associate Professor—population, behavioral-cultural, urban

Martin E. Dulgarian, Ph.D., Michigan, 1965, Associate Professor—Asia, history and philosophy of geography, political

Jerry E. Green, Ph.D., North Carolina, 1976, Assistant Professor—physical natural resources, land use planning, remote sensing

John C. Klink, Ph.D., Minnesota, 1974, Associate Professor—climatology, soils

Howell C. Lloyd, Ph.D., Northwestern, 1964, Professor—political, Europe, settlement

Byron E. Logan, Ph.D., North Carolina, 1956, Associate Professor—Africa, economic, Brazil

James M. Rubenstein, Ph.D., Johns Hopkins, 1975, Associate Professor—planning, urban policy analysis, new towns

Lee H. Slorp, Ph.D., Illinois, 1977, Assistant Professor—plant geography, land forms, cartography, remote sensing

Richard V. Smith, Ph.D., Northwestern, 1957, Professor—urban, population, recreation

John L. Thompson, Ph.D., Wisconsin, 1955, Professor and Chair—conservation, Soviet Union, energy resources

Joseph T. Urell, Ph.D., Cincinnati, 1976, Assistant Professor—urban-residential mobility, twentieth-century geographic thought

Cyrus W. Young, Ph.D., Michigan State, 1970, Associate Professor—marketing, transportation, urban

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Aitken, Stuart C. Practicum Report: "The Impact of Displacement in Two Baltimore Neighborhoods," 1981.*

Greenslade, Nancy J. Practicum Report: "A Plan for the Fairfield Parks and Recreation Department," 1981.*

Young, Ian H. Practicum Report: "An Internship with the Center for Urban Affairs, Miami University," 1981.*

University of Miami

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: 1971

DEGREES OFFERED: M.A.

GRANTED 7/1/81–6/30/82: 2

GRADUATE STUDENTS IN RESIDENCE: 7
NOT IN RESIDENCE: 5

CHAIRPERSON: Peter O. Muller

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Thomas D. Boswell, Graduate Advisor, Department of Geography, P.O. Box 248152, University of Miami, Coral Gables, Florida 33124
Telephone (305) 284-4087

PROGRAMS AND RESEARCH FACILITIES: The University of Miami is located in a growing, uniquely cosmopolitan urban area on the margins of the Caribbean. Appropriately, the Department of Geography has particular strength in the fields of urban geography and tropical area studies. Programs leading to the Master's Degree tend to focus systematically upon urban problems and regionally upon tropical studies, though not to the exclusion of other combinations; there is much flexibility

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and arrangements are made to serve individual needs. The possibilities involved are reflected by the faculty's areas of specialization, given below.

The Department's facilities incorporate a large map library and a cartographic laboratory whose equipment includes a darkroom and complete color production facilities. The University Library houses a substantial collection of geographic literature; modern computer facilities (Univac and IBM) exist on campus, and an expanding terminal installation is housed in the Department. The University maintains nearby field stations, available for use by the Department, on Biscayne Bay and in the Florida Keys and the Everglades.

The publications of the Miami Geographical Society are produced in the Department, the latest title being *Geography of Viticulture* by H. J. deBlij.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Miami operates on the semester system. The Department offers two tracks leading to the M.A. in Geography. The *thesis track* requires 30 credits at the graduate level, of which at least 18 are in Geography and 6 in thesis work; a final requirement involves the oral defense of the thesis. The *non-thesis track* requires 36 credits at the graduate level, of which at least 24 are in Geography; in addition, candidates must successfully complete two written examinations (one covering the discipline in general, and the second focusing on an approved area of specialization). Applicants should have a B average in their undergraduate work and should have a combined four-figure score in the Graduate Record Examination. Financial aid includes Departmental assistantships ($4400).

STAFF:

Thomas D. Boswell, Ph.D., Columbia, 1973, Associate Professor—population and migration, the Caribbean and Middle America, urban social problems

Donald L. Capone, Ph.D., Michigan State, 1971, Associate Professor—cartography, conservation and resource management, East Africa, crime

James R. Curtis, Ph.D., UCLA, 1978, Assistant Professor—urban cultural landscapes, folk and popular culture, U.S. historical geography, ethnic groups

Harm J. deBlij, Ph.D., Northwestern, 1959, Professor—political, regional studies, viticulture, Southern Africa

David M. Helgren, Ph.D., Chicago, 1975, Assistant Professor—geomorphology, Quaternary studies, archeology, Southern Africa

Peter O. Muller, Ph.D., Rutgers, 1971, Professor and Chairperson—intrametropolitan spatial structure, U.S. economic geography, energy and settlement patterns

Ira M. Sheskin, Ph.D., Ohio State, 1977, Assistant Professor—urban transportation, quantitative, urban and regional planning, energy systems

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Bergamaschi, Dorothy H. "A Field Theory Approach to the Evolution and Impacts of Extended Maritime Jurisdictions," 1981.

Friedman, Helen A. "Spatial Variation in Attitudes Toward Transportation: Differences Between Urban and Rural Areas," 1981.

Michigan State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1955 GRADUATE PROGRAM FOUNDED: 1952

DEGREES OFFERED: M.A., M.S., Ph.D.

GRANTED 7/1/81-6/30/82: 8 Masters, 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 25 Masters 16 Ph.D.
NOT IN RESIDENCE: 2 Masters 4 Ph.D.

CHAIRMAN: Gary A. Manson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Gary Manson, Chairman, Department of Geography, M.S.U., East Lansing, Michigan 48824
Telephone (517) 355-4649

PROGRAMS AND RESEARCH FACILITIES: Graduate programs are designed to give various levels of professional competence in the tools, substance, methodology and theory of geography. Systematic fields of emphasis are urban, physical, cartography and regional development with other programs possible. Faculty research and travel give regional strength in Africa, Latin America, Europe, East Asia and the United States.

Strong supporting fields include the social sciences, history, soils, geology, food sciences, community medicine, resource development, marketing, urban planning, recreation, and transportation. Geographic study and research are facilitated by the African, Asian, and Latin American Studies Centers, and the University Computer Center.

The MSU library contains well over 2 million volumes and a map library. The Department facilities include an extensive aerial photo collection, a well-equipped cartography laboratory and a Center for Cartographic Research and Spatial Analysis, a graphics laboratory with multiple terminals, and easy access to the University CDC 6500 computer. University housing includes numerous on-campus apartments and a graduate dormitory.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan*—quarter system. *Admission requirements for M.A.*—completion of an undergraduate degree with a 3.4 average for the last two academic years; encourage any qualified student to apply. *Ph.D.*—completion of master's degree or equivalent, satisfactory grade-point average.

Teaching assistantships, university scholarships, research assistantships in cartography, M.S.U. Graduate Office scholarships, and other awards are available. Half-time stipends starting at $5,373 are available depending on the degree held (1981-82 rates). Deadline for applications is February 15 for financial aid the following autumn.

STAFF:

Dieter Brunnschweiler, Ph.D., Zurich, 1952, Professor—physical, remote sensing, Latin America

David Campbell, Ph.D., Clark University, 1977, Assistant Professor—Africa, social/economic change in developing world

Michael Chubb, Ph.D., Michigan State, 1967, Associate Professor—recreation geography, resource geography, environmental quality, research methods

Joe T. Darden, Ph.D., Pittsburgh, 1972, Professor—urban-social, cultural, U.S.

Richard Groop, Ph.D., Kansas, 1976, Assistant Professor—cartography, population

Jay R. Harman, Ph.D., Illinois, 1968, Professor—physical (plant geography, synoptic climatology)

John M. Hunter, Ph.D., Reading, 1954, Professor—medical, Africa

Daniel Jacobson, Ph.D., Louisiana State, 1954, Professor—cultural-historical, education

J. Michael Lipsey, M.A., Michigan State, 1981, Specialist—cartography

Gary A. Manson, Ph.D., Washington, 1970, Associate Professor—geographic education

Ian M. Matley, Ph.D., Michigan, 1961, Professor—cultural, U.S.S.R., East Europe

Assefa Mehretu, Ph.D., Johns Hopkins, 1969, Visiting Associate Professor—economic development, location theory, Africa

Bruce W. Pigozzi, Ph.D., Indiana, 1979, Assistant Professor—economic, transportation, quantitative

Lawrence M. Sommers, Ph.D., Northwestern, 1950, Professor—methodology, Western Europe

Robert N. Thomas, Ph.D., Pennsylvania State, 1968, Professor—population, migration systems, Latin America

Jack Williams, Ph.D., Hawaii, 1973, Associate Professor—agricultural, East Asia, Southeast Asia, cartography

Harold A. Winters, Ph.D., Northwestern, 1960, Professor—physical (geomorphology), Michigan

Robert I. Wittick, Ph.D., Iowa, 1972, Associate Professor—transportation, information systems, quantitative, computer techniques.

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Al-Ghamdi, Abdulaziz. "An Approach to Planning a Primary Health Care Delivery System in Jeddah, Saudi Arabia," 1981.

Alijani, Bohloul. "Synoptic Origin of Precipitation in Iran," 1981.

Al-Thubaity, Khudhran. "Rural Migrants in Taif: Their Migration and Residential Mobility," 1981.

Gribb, William. "The Grand Traverse Bands' Land Base: A Cultural, Historical Study of Land Transfer in Michigan," 1982.

Najm, Mahmoud. "Agricultural Land Use in the Benghazi Area, Libya: A Spatial Analysis of Cultural Factors Affecting Crop and Livestock Patterns," 1982.

Master's:

Muniz, Osvaldo. "Highland Rural Migration in Northern Chile," 1981.

Schwartz, Mark D. "Air Mass Climatology of the North-Central United States," 1982.

Zurick, David N. "The Urban Tiller: An Investigation into the Urban Agricultural System of Kathmandu, Nepal," 1981.

University of Minnesota

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1925 GRADUATE PROGRAM FOUNDED: 1930s

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81–6/30/82: 5 M.A., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 51 M.A. 28 Ph.D.
NOT IN RESIDENCE: 2 M.A. 9 Ph.D.

CHAIRMAN: John S. Adams

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor John S. Adams, Chairman, Department of Geography, University of Minnesota, 414 Social Science Building, Minneapolis, Minnesota 55455
Telephone (612) 373-2661

PROGRAMS AND RESEARCH FACILITIES: The graduate program in geography at the University of Minnesota emphasizes flexibility and freedom of choice. Students are encouraged to pursue their own interests and to realize their full personal potential. They design their own programs, in consultation with members of the faculty, and no two students have identical programs.

The most important and distinctive feature of the program is the close working relationship between students and faculty members, and especially between individual students and their advisors. The list of faculty members and of their interests suggests the diverse subject areas in which students may do research.

Location in a major metropolitan area encourages and facilitates study of urban and metropolitan problems. The department has a close working relationship with the Center for Urban and Regional Affairs, the Hubert H. Humphrey Institute of Public Affairs, and various branches of nearby State government, offering graduate students numerous resources and research opportunities.

The department has a strong tradition of historical, cultural, and humanistic geography. Faculty members have a wide range of regional interests, and play major roles in the China Center, the Afro-American and African Studies Department, and the South Asian Studies Department. The department encourages foreign area and development studies by graduate students; recent students have done research in Asia, Africa, South America, and Europe.

The physical geography program has concentrated in climatology, and there is also strong faculty interest in paleogeography, biogeography, soils, and water resources.

The University of Minnesota has all the resources one would expect to find at a major university: fine library and sheet map collections, good computer facilities and services, and strong programs in areas cognate to geography.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Minnesota is on the quarter system. Students entering the graduate program normally have a strong undergraduate major in geography with a good grade average, but students with good academic records in other majors and students from other countries are encouraged to apply for admission.

Teaching assistantships and a few research assistantships are available on a competitive basis. Stipends in 1981-82 ranged from $6,147 to $7,695 for nine months, plus remission of nonresident tuition rates. Students with outstanding records may be nominated for Graduate School Fellowships, which paid tuition and a stipend of $4,500 in 1981-82.

HUMAN RIGHTS STATEMENT: The Board of Regents has committed itself and the University of Minnesota to the policy that there shall be no discrimination on the basis of race, creed, color, sex, age, or national origin. In adhering to this policy, the University abides by the requirements of Titles VI and VII of the Civil Rights Act of 1964, Revised Order No. 4, Executive Orders 11246 and 11375, Sections 799A and 845 of the Public Health Service Act, and other federal regulations and pertinent acts of Congress.

It is also the policy of the University of Minnesota not to discriminate on the basis of sex in its educational programs, admissions, activities, or employment policies as required by Title IX of the Education Amendments of 1972.

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, Minneapolis, Minnesota 55455, (612) 373-7969, or to the Director of the Office of Civil Rights, Department of Health, Education, and Welfare, Washington, D.C. 20201.

STAFF:

John S. Adams, Ph.D., Minnesota, 1966, Professor and Chairman —American cities, regional analysis

Russell B. Adams, Ph.D., Minnesota, 1969, Associate Professor—quantitative-economic, U.S.S.R.

Sona K. Andrews, Ph.D., Arizona State, 1981, Assistant Professor—cartography

Ward J. Barrett, Ph.D., UC, Berkeley, 1959, Professor—Middle America, Oceania, historical

John R. Borchert, Ph.D., Wisconsin, 1949, Regents' Professor—metropolitan and regional land use planning

Dwight A. Brown, Ph.D., Kansas, 1968, Associate Professor—physical, cartography, paleogeography, water resources

Philip J. Gersmehl, Ph.D., Georgia, 1970, Associate Professor—physical, education, North America

John Fraser Hart, Ph.D., Northwestern, 1949, Professor—cultural, North America

Mei-Ling Hsu, Ph.D., Wisconsin, 1966, Professor and Director, China Center—thematic mapping, East Asia, quantitative methods

Fred E. Lukermann, M.A., Minnesota, 1950, Professor and Dean, College of Liberal Arts—historical-geographical thought

E. Cotton Mather, Ph.D., Wisconsin, 1951, Professor—rural settlement of the Americas

Roger P. Miller, Ph.D., UC, Berkeley, 1979, Assistant Professor—urban, historical, geographical methodology and theory

Philip W. Porter, Ph.D., London, 1957, Professor and Director, Office of International Programs—cartography, Africa

John G. Rice, Fil. lic., Uppsala, 1965, Professor—historical, Europe, especially the Scandinavian states and Finland

Joseph E. Schwartzberg, Ph.D., Wisconsin, 1960, Professor—South Asia, Southeast Asia, political

Earl P. Scott, Ph.D., Michigan, 1974, Associate Professor and Chairman, Department of Afro-American and African Studies—cultural, economic, Africa

Eric S. Sheppard, Ph.D., Toronto, 1977, Associate Professor—economic, geographical theory, quantitative spatial analysis

Richard H. Skaggs, Ph.D., Kansas, 1967, Professor—climatology

Roderick H. Squires, Ph.D., Durham, 1970, Associate Professor—biogeography, paleogeography

Yi-Fu Tuan, Ph.D., UC, Berkeley, 1957, Professor—cultural

Connie H. Weil, Ph.D., Columbia, 1980, Assistant Professor—medical, Latin America

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Kvale, Katherine M. "Schistosomiasis in Brazil: A Case Study of a New Focus, Pentecoste, Ceara," 1981.

Winkler, Julie A. "A Synoptic-Dynamic Climatology of Extreme Precipitation in Minnesota," 1982.

Master's:

Amley, Christopher C. "An Alternative to Factorial Ecology," 1981.

Patton, Melanie M. "The Disease Ecology of Hydatidosis in Turkana District, Kenya," 1981.

Mississippi State University

DEPARTMENT OF GEOLOGY AND GEOGRAPHY

DATE FOUNDED: 1916 GRADUATE PROGRAM FOUNDED: 1925

DEGREES OFFERED: M.S., M.A.T., M.S.S.

GRANTED 8/1/81-6/30/82: 2 M.S.

GRADUATE STUDENTS IN RESIDENCE: 16 M.S.
NOT IN RESIDENCE: 2 M.S.

HEAD: Troy J. Laswell

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Troy J. Laswell, Head, Department of Geology and Geography, Mississippi State University, P.O. Drawer GG, Mississippi State, Mississippi 39762
Telephone (601) 325-3915

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts in Teaching and the Master of Social Studies are non-thesis, interdisciplinary degrees. The Master of Science program requires a minimum of thirty semester hours credit, including six hours of thesis, and proficiency in one foreign language. In the Master of Science program the emphasis is to provide a strong background in systematic and regional geography with techniques and training for independent research. Limited specialization within the department is presently available (quantitative techniques, urban and regional planning, cartography, climatology, economic, and some regional specialties). There are numerous opportunities for interdisciplinary studies within this program. Mississippi State University has many strong departments within the Colleges of Agriculture, Arts and Sciences, Business and Industry, Education, Engineering, Veterinary Medicine, and the Schools of Architecture and of Forest Resources. Campus and off-campus research facilities include Mitchell Library, a depository for government publications and a member of many library interchange networks, a large computing center, the Gulf Coast Research Laboratory at Ocean Springs, and the National Space Technology Laboratory at Bay St. Louis. The University is a member of several consortia, such as Gulf Universities Research Consortium, Mississippi-Alabama Sea Grant Consortium, and Oak Ridge Associated Universities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Minimum admission standards are a 2.5 grade point average for the last two years of undergraduate study, or a minimum of 800 on the aptitude tests of the Graduate Record Examination. Undergraduate programs need not have been in geography, but at least 18 undergraduate hours in geography are prerequisite to the M.S. program in geography. Several graduate assistantships are available. Reimbursement begins at $4500 for nine months, plus remission of out-of-state fees. Graduate assistants may carry a maximum of ten hours credit per semester. Some additional financial aid may be available from contractual research carried on by the department.

FULL-TIME STAFF:

Daniel W. Cooke, Ph.D., Tennessee, 1975, Assistant Professor (Geography)—cultural, economic, Latin America, cartography

Donald M. Keady, Ph.D., Texas A & M, 1970, Professor (Geology)—geomorphology, environmental, water resources, engineering geology

Troy J. Laswell, Ph.D., Missouri, 1953, Professor (Geology and Geography) and Head of Department—climatology, Gulf Coast studies, photo interpretation, physical, earth sciences

Thomas W. Lins, Ph.D., Kansas, 1969, Associate Professor (Geology)—environmental, oceanography, sedimentology

Merle W. Myers, Ph.D., Clark, 1948, Professor, Emeritus (Geography)—cartography, environmental, Europe, North America, physical, urban

Karl A. Riggs, Ph.D., 1956, Associate Professor (Geology)—economic mineral resources

Ernest E. Russell, Ph.D., Tennessee, 1965, Professor (Geology)—geomorphology, Gulf Coast studies, paleogeography, paleontology

Ronald V. Shaklee, Ph.D., Kansas, 1982, Assistant Professor (Geography)—remote sensing and photo interpretation, urban, land use planning, cartography

Charles L. Wax, Ph.D., Louisiana State, 1977, Assistant Professor (Geography)—climatology, meteorology, environmental, conservation, North America

PART-TIME STAFF:

Ester Breland, Jr., M.S., Mississippi State, 1973, Acting Instructor (Geography)—cultural, conservation, world regional

John M. Kaye, Ph.D., Louisiana State, 1974, Assistant Professor (Geology)–earth sciences, paleogeography, vertebrate paleontology

ADJUNCT STAFF:

James I. Jones, Ph.D., Wisconsin, 1964, Adjunct Professor (Geology)—Director, Mississippi-Alabama Sea Grant Consortium

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Barcellona, Bruce. "Application of Photo-optical and Landsat MSS Data to Monitor Surface Aggregate Mining: Lowndes and Monroe Counties, Mississippi," 1981.

Elliott, Jack D., Jr. "The Elusa Oikoumene: A Geographical Analysis of an Ancient Desert Ecosystem Based on Archaeological, Environmental, Ethnographic, and Historical Data," 1982.

University of Missouri–Columbia

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1950 GRADUATE PROGRAM FOUNDED: 1950

DEGREES OFFERED: M.A.

GRANTED 7/1/81–6/30/82: 10

GRADUATE STUDENTS IN RESIDENCE: 21
NOT IN RESIDENCE: 1

CHAIRMAN: Walter A. Schroeder

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Director of Graduate Studies, Department of Geography, University of Missouri-Columbia, Columbia, Missouri 65211
Telephone (314) 882–8370

PROGRAMS AND RESEARCH FACILITIES: The department offers the M.A. degree on alternative programs, with or without a thesis. Thirty-two hours of course work, with varying amounts of individual reading and research, are required. Close contact between graduate students and staff is emphasized. Programs are tailored to fit the individual needs and interests of students, making liberal use of collateral fields such as atmospheric science, geology, anthropology, economics, history, and planning. Programs focussed on North America, physical geography and environmental studies, economic and planning-related geography, cartography, and Asia are common. The University library holdings in books, journals, and documentary materials in geography and related fields are very extensive. In addition, the department itself has a large collection of books, journals, bibliographical and other research aids and maps. Computer facilities, including new graphics equipment, are readily available, and their use is encouraged. The department's cartographic program and equipment are supplemented by those of the Geographic Resources Center, an interdisciplinary center for computer graphics and remote sensing. Graduate minors are available in Regional Science and Environmental Science. The department interacts very closely with a vigorous statewide Geography Extension program, through which internships are available. Graduates are prepared for Ph.D. work, for cartographic work, planning, teaching, and other kinds of employment.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Admission: An applicant with an undergraduate G.P.A. of at least 3.0, on a 4.0 system, may be admitted on the basis of this record alone. Lower G.P.A.'s require strong support in the form of letters of recommendation and good scores on the Graduate Record Examination. Applicants must take the Verbal and Quantitative parts of this examination. Eight teaching assistantships of approximately $4575 for nine months and a few grant-related research assistantships are available on a competitive basis.

STAFF:

Robert F. Austin, Ph.D., Michigan, 1977, Assistant Professor —population, cultural, Southeast Asia, cartography, spatial analysis

Wayne L. Decker, Ph.D., Iowa State, 1955, Professor of Atmospheric Science—climatology

J. Trenton Kostbade, Ph.D., Michigan, 1957, Associate Professor—geographic education, political, Anglo-America, Europe

Gail S. Ludwig, D.A., Northern Colorado, 1977, Assistant Professor (Extension)—geographic education, outdoor environmental education, remote sensing

William A. Noble, Ph.D., Louisiana State, 1968, Associate Professor—cultural, architectural, South Asia

Walter A. Schroeder, M.A., Chicago, 1958, Instructor and Chairman—physical geography, Missouri

Jesse H. Wheeler, Jr., Ph.D., Chicago, 1950, Professor—United States, Britain, geographic bibliography, college teaching of world regional geography, historical

TITLES OF THESES COMPLETED (Not previously reported):

Master's:

Burson, Thomas Ryan. "The Geography of Interstate Migration, 1960-1977," 1980.*

University of Montana

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1956 GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.A. in Geography, M.S. in Rural, Town, and Regional Planning

GRANTED 7/1/81–6/30/82: 3

GRADUATE STUDENTS IN RESIDENCE: 4 M.A. 10 M.S.
NOT IN RESIDENCE: 4 M.A. 11 M.S.

CHAIRMAN: Paul B. Wilson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Department of Geography, University of Montana, Missoula, Montana 59812
Telephone (406) 243–4302

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography at Montana is a 7-person department with a small graduate group and an atmosphere in which the student can receive a good deal of individual attention. The mountain location of Missoula offers many research opportunities as well as amenities. Encouragement is given to involvement in research on local, Pacific Northwest, or Rocky Mountain problems.

Programs: The M.A. in geography requires a minimum of 45 graduate credits, a reading knowledge of a foreign language or a substantial competency in quantitative analysis, and a thesis. Although students may pursue an M.A. thesis in any specialty of a faculty member listed below, cartography, watershed analysis, and biogeography are given particular emphasis. These areas are best aligned with the strengths of the undergraduate degree program. The M.S. in Rural, Town, and Regional Planning is intended to prepare students for positions in agencies which provide planning services for sparsely populated areas. It involves 70 graduate credits, a six-month internship, and a professional paper. The program relies on course offerings and expertise not only in geography but also in law, forestry, geology, sociology, economics, political science, and business administration.

The M.S. in Rural, Town, and Regional Planning has been designated a WICHE (Western Interstate Commission for Higher Education) program. As a result, students from Alaska, Idaho, Oregon, and Washington can enroll in this program at a resident tuition rate.

Research Facilities: Physical facilities and library holdings are modest but generally adequate for the areas of geography and planning in which theses and professional papers will be accepted. Facilities may not be adequate for highly specialized research.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:
Academic Plan: Quarter system. Students may enter any quarter.

Admission Requirements: Applications are examined for evidence of potential for scholarly achievement. A 3.0 GPA (on 4.0 systems) is required for admission on regular status. All applicants must supply Graduate Record Examination scores (verbal and quantitative), and applicants from non-English speaking countries must have taken the Test of English as a Foreign Language. Applications are welcome from prospective students whose prior training was not in geography or planning. Requirements to make up undergraduate deficiencies are kept to a minimum.

Financial Aid: The Department has a limited number of $4300 Graduate Teaching Assistantships which carry remission of most fees. The successful candidates are selected from among those whose applications for admission to the Graduate School are complete on April 1. Opportunities for employment on faculty research or consulting projects are occasionally available.

FACULTY:

Harold W. Bockemuehl, Ph.D., Massey 1974, Associate Professor—cartography, map and air photo interpretation, urban, Australia-New Zealand-S.W. Pacific

John M. Crowley, Ph.D., Minnesota, 1964, Professor—mountain geography, biogeography, Rocky Mountains, Montana

Evan Denney, Ph.D., Washington, 1970, Professor—resources, land subdivision, land use planning, economic, Pacific Northwest

John J. Donahue, Ph.D., Syracuse, 1971, Associate Professor—landforms, air photo interpretation, terrain evaluation, morphometric analysis

Chris Field, Ph.D., UCLA, 1966, Associate Professor—cultural, environmental change, irrigation, Hispanic America

Darshan S. Kang. Ph.D., Nebraska-Lincoln, 1975, Associate Professor—water resources, climatology, meteorology, quantitative methods, South Asia

Paul B. Wilson, Ph.D., Nebraska-Lincoln, 1972, Associate Professor—cartography, urban, computer graphics, historical, North America

FACULTY AFFILIATES:

G. Thomas Foggin III, Ph.D. (forestry), Montana, 1980, David Stiller & Associates—physical geography, watershed management, environmental studies

Robert C. Lucas, Ph.D., Minnesota, 1962, U.S. Forest Service—geography of recreation, resource management and conservation, cultural

Philip Maechling, M.A., Pennsylvania, 1975—environmental design, landscape architecture

Daniel A. Obermeyer, B.A., Montana State, 1971—planning

George H. Stankey, Ph.D., Michigan State, 1970, U.S. Forest Service—land use and recreation planning, social

Jean E. Wilcox, J.D., Montana, 1980—land use and natural resource law

A. L. Zimmerman, B.S., Montana State, 1949, U.S. National Weather Service (retired)—climatology, meteorology, hydrology

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

M.S. Professional Papers:

Adibi, Ali. "Rural Development Centers: A Case Study in Iran," 1981.

Clark, Margaret H. "Growth Management—An Overview," 1981.

Kaufman, Nicholas P. "Fiscal Impact Analysis for New Single-Family Residential Development in Plains, Montana," 1981.

Murray State University

DEPARTMENT OF GEOSCIENCES

DATE FOUNDED: 1930 GRADUATE PROGRAM FOUNDED: 1969

DEGREES OFFERED: M.A. in Geography, M.A. in Education (emphasis in Geography), M.A.C.T., S.C.T.

GRANTED 7/1/81-6/30/82: 2

GRADUATE STUDENTS IN RESIDENCE: 9
NOT IN RESIDENCE: 3

CHAIRMAN: Neil V. Weber

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Department of Geosciences, Murray State University, Murray, Kentucky 42071
Telephone (502) 762-2591

PROGRAMS AND RESEARCH FACILITIES: The Geosciences Department offers the M.A. degree in geography with the thesis (30 hours) or non-thesis (33 hours) option. An oral exam on the thesis material is required of the thesis student and a written comprehensive for the non-thesis student.

The department also participates in three additional graduate programs. They are the M.A. in Education with 18 hours of geography, the Specialist in College Teaching with 30 hours of geography, and the Master of Arts in College Teaching (junior college) requiring also 30 hours in geography. The department has a well-equipped cartography laboratory, remote sensing laboratory, a departmental library/reading room, and a map library. The cartography laboratory houses a Numonics digitizer, Dell-Foster Quantizer, zoom transferscope, Kelsh plotter and a map-o-graph as specialized equipment. A number of geosciences faculty teach and do research in association with the Mid-America Remote Sensing Center (MARC). There, aerial photographic and digital satellite (LANDSAT) data is processed and analyzed using a UNIVAC V77-612 computer and a COMTAL-Dual Image Processor. Other major equipment items include a STATOS 9222 Plotter, Talos SBL660 Digitizer, CROMALIN color processing system, and Kern Stereoplotter.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The university operates on the semester system and has two five-week summer sessions. To be admitted to graduate school, an undergraduate major in Geography is desirable but not necessary for admittance to the program. However, beginning graduate students are expected to have an adequate knowledge of the field. Students should have completed one undergraduate course in cartography. If this undergraduate requirement has not been met, it is possible to take cartography for undergraduate credit while enrolled in the graduate program. The applicant should have an overall undergraduate grade point average of 2.5 (based on 4.0) or above with a grade point average of 3.0 in geography. Students who do not meet these requirements may be admitted to the program with the approval of the geosciences faculty.

STAFF:

Armin L. Clark, Ph.D., Tennessee, 1961, Professor—Cenozoic stratigraphy, petrology, paleontology

David H. Irwin, M.S., Tennessee, 1949, Associate Professor—climatology, history of geography, Southeast Asia

Thomas C. Kind, Ph.D., Indiana State, 1976, Associate Professor—physical geography, remote sensing, digital cartography

James P. Matthai, Ed.D., Teachers College, Columbia, 1962, Professor—conservation

John E. Mylroie, Ph.D., Rensselaer Polytechnic Institute, 1977, Assistant Professor—karst geomorphology

Neil V. Weber, Ph.D., Indiana State, 1972, Associate Professor—resources management/planning

Peter W. Whaley, Ph.D., Louisiana State, 1968, Professor—depositional environments, coal geology

AFFILIATED STAFF:
Kandis K. Carstens, M.A. (geography), 1981, Murray State, Cartographer
Carson R. Dayley, M.A. (geography), Murray State, 1982, Photogrammetrist
Louis E. Hicks, M.A. (geography/planning), Murray State, 1972, Instructor

University of Nebraska - Lincoln

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1907 GRADUATE PROGRAM FOUNDED: 1907

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 4 M.A., 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 19 M.A. 7 Ph.D.
NOT IN RESIDENCE: 0 M.A. 4 Ph.D.

CHAIRPERSON: Merlin P. Lawson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman of the Graduate Committee, Department of Geography, University of Nebraska, Lincoln, Nebraska 68588
Telephone (402) 472-2865

PROGRAMS AND RESEARCH FACILITIES: There is substantial flexibility in designing programs, but course work and staff interests tend to group into several distinct areas.

M.A. LEVEL: (1) *Climatology and Meteorology,* with a focus on climatic change, dendroclimatology, climatic modelling, severe storms, air pollution, and snow and ice studies. (2) *Historical-cultural geography,* with work tending to focus on the Great Plains. (3) *Spatial analysis and theory,* together with separate emphases on diffusion studies and issues concerned with environment and behavior. (4) *Industrial location* with an applied focus, supplemented by courses in regional economics. (5) *Cartography,* including thematic mapping, computer cartography, and photogrammetry.

Ph.D. LEVEL: (1) *Climatology and Meteorology.* With good facilities and seven staff in this area, several programs of specialization are available. Faculty interests center on dynamic and statistical modelling, severe storms, and climatic change.(2) *Historical-cultural geography.* Continuing a long tradition of work in this area, the work of various faculty tends to focus on early settlement (especially on Great Plains), land use, perception of past environments, and the interaction between the Anglo frontier and native Americans. (3) *Environmental and social issues,* with a focus on the importance of space in social organization, rural and urban problems, and experiences, perceptions, and thoughts about one's environmental setting.

(4) *Cartography*, with emphases on thematic map design and computer assisted cartography.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. For admission to the M.A. program, a person should have a bachelor's degree in geography or some other appropriate field. GRE scores are strongly recommended. The M.A. degree requires 24 hours of course work, plus a thesis (or 36 hours without a thesis) and a written examination. For admission to the Ph.D. program, a person should have an M.A. in geography (with thesis) or its equivalent, and GRE scores are required. Some 36 hours of course work is necessary, plus a dissertation, written and oral comprehensives, and one research tool.

Graduate teaching assistantships ($4600–5500) carry with them remission of non-resident tuition fees and free summer tuition, and six hours of free tuition each semester. Duties are 14 hours per week, most commonly involving laboratory teaching. M.A. students are eligible for two years' support, and Ph.D. students up to three years'. University fellowships are available to persons with outstanding qualifications. Also available are research assistantships and part-time teaching positions (freshman-level courses). Inquire early if possible; completed applications are due March 1.

The University of Nebraska is an Affirmative Action Equal Opportunity Institution.

STAFF:

Douglas M. Amedeo, Ph.D., Iowa, 1967, Associate Professor—spatial theory, quantitative analysis, environment and behavior, diffusion

Robert C. Balling, Ph.D., Oklahoma, 1979, Assistant Professor—climatic fluctuation, physical climatology, computer graphics

Brian W. Blouet, Ph.D., Hull, 1964, Professor of Center for Great Plains Studies—historical settlement, Great Plains, Mediterranean

Kenneth F. Dewey, Ph.D., Toronto, 1973, Associate Professor—applied climatology, meteorology, snow and ice studies, severe storms

Leslie Hewes, Ph.D., U.C., Berkeley, 1940, Professor Emeritus—historical and cultural geography, Great Plains

Jay S. Hobgood, Ph.D., Ohio State, 1982, Assistant Professor—dynamic meteorology, tropical weather systems, computer graphics

Bruce E. Kopplin, A.B.D., Georgia, Visiting Assistant Professor—applied climatology, meteorology

Stephen J. Lavin, Ph.D., Kansas, 1979, Assistant Professor—map design, map perception, computer cartography

Merlin P. Lawson, Ph.D., Clark, 1973, Professor and Chairman—Pleistocene and historic environments, climatic change, dendroclimatology

Richard E. Lonsdale, Ph.D., Syracuse, 1960, Professor—industrial location, small towns, Australia, Soviet Union

C. Barron McIntosh, Ph.D., Nebraska, 1955, Professor Emeritus—applied climatology, Great Plains settlement

Dean S. Rugg, Ph.D., Maryland, 1962, Professor—urban, history and philosophy of geography, Eastern and Western Europe

Robert H. Stoddard, Ph.D., Iowa, 1966, Professor—field techniques, social, South Asia

Michael M. Swann, Ph.D., Syracuse, 1980, Assistant Professor—historical urban geography, historical demography, Latin America

Julie A. Winkler, Ph.D., Minnesota, 1982, Assistant Professor—synoptic climatology, severe local storms, natural hazards

David J. Wishart, Ph.D., Nebraska, 1971, Associate Professor—historical, cultural, perception of past environments, Great Plains

AFFILIATED STAFF: Other persons teaching geography courses and/or working closely with geography students:

Frederick C. Luebke, Ph.D., (history), Nebraska, Professor—Great Plains, ethnic group settlement

Gary E. Moulton, Ph.D., (history), Oklahoma State—Center for Great Plains Studies, editor of Lewis and Clark Expedition journals

Mary-Louise Quinn, Ph.D., (geography), U.C., Berkeley, Assistant Professor—water resources

Donald C. Rundquist, Ph.D., (geography), Nebraska, Assistant Professor—remote sensing

John F. Shroder, Jr., Ph.D., (geology), Utah, Associate Professor—tropical and periglacial geomorphology

William J. Wayne, Ph.D., (geology), Indiana, Professor—geomorphology, urban geology, Quaternary studies

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Heim, Richard R., Jr. "An Analysis of Snow Cover-Atmospheric Circulation Interactions," 1982.*

Mangimeli, John A. "Dendroclimatic Analysis of Upper and Lower Tree-Line Species in the Sangre de Cristo Mountains of Colorado," 1981.*

Smith, Walter P. "Prediction of Cool Season Precipitation in the Western United States," 1981.*

University of Nebraska at Omaha

DEPARTMENT OF GEOGRAPHY-GEOLOGY

DATE FOUNDED: 1958 GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 5

GRADUATE STUDENTS IN RESIDENCE: 32
NOT IN RESIDENCE: 5

CHAIRMAN: Charles R. Gildersleeve

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Joseph S. Wood, Chairman, Graduate Program Committee, Department of Geography-Geology, University of Nebraska at Omaha, Omaha, Nebraska 68182
Telephone (402) 554-2662

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography-Geology provides opportunities for graduate work in a broad spectrum of systematic and technical fields. The department is well staffed and equipped to prepare students for careers in remote sensing applications, environmental analysis, planning, and further academic endeavors.

The University of Nebraska Computer Network includes an IBM 360/65, a CDC Cyber 172, and two IBM 370/158 computers.

The Remote Sensing Applications Laboratory has its own PDP 1103 minicomputer and interacts with the computer system through its own Raytheon PTS-100 CRT and DEC-Writer LA 36. Software includes UNORSAL, DIRS, and LARSYS-III Multispectral alogrithms. The Remote Sensing Applications Laboratory also houses Bausch and Lomb Zoom Transfer Scopes, a Numonics 1224 Digitizer/Planimeter, a Spatial Data Density Slicer, EYECOM II Picture Digitizer, Multispectral Analysis System, and a sizeable collection of all types of imagery, including over 200 LANDSAT tapes.

The department maintains excellent cartographic and darkroom facilities including a 16" x 20" negative-format copy camera and full color reproduction capabilities.

The University Library maintains an especially good collection of urban materials, some 200 periodicals and journals of interest to geographers, and an extensive map collection.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The *Master of Arts* degree in geography is offered. Students must complete a minimum of 24 semester hours of approved graduate work and up to 6 semester hours of thesis for a total of 30 semester hours. One general concepts course is required in addition to the thesis. Internships are available with local agencies.

Admission Requirements: An applicant for admission should present as a prerequisite a minimum of 15 semester hours of geography, including human and physical geography and cartography, with a minimum GPA of 3.0 on a 4.0 scale in the major program. Some background in physical geography is expected for teaching assistants. Deficiencies must be made up before a student is admitted to candidacy.

Financial Aid: A number of teaching and research assistantships are available each year for qualified applicants. The standard nine-month assistantship carries a stipend of about $3,920 plus tuition waiver and requires 20 hours of work per week.

Part-time and summer employment is occasionally available in the Remote Sensing Applications Laboratory. In addition, several firms provide compensation for work performed under the internship program.

STAFF:

Nicholas Bariss, Ph.D., Clark, 1967, Professor—geomorphology with emphasis on loess topography, climatology, Europe

George F. Engelmann, Ph.D., Columbia, 1978, Assistant Professor—vertebrate paleontology, Tertiary stratigraphy and sedimentation

Charles R. Gildersleeve, Ph.D., Nebraska, 1978, Associate Professor and Chairperson—economic, urban, Latin America, with emphasis on location theory and urban ethnicity

Jeffrey S. Peake, Ph.D., Louisiana State, 1977, Assistant Professor and Director, Remote Sensing Applications Laboratory—remote sensing, physical, climatology, resource conservation

Michael P. Peterson, Ph.D., SUNY Buffalo, 1982, Assistant Professor—remote sensing, computer mapping

Harold J. Retallick, Ph.D., Clark, 1950, Professor—urban geography, environmental studies

John F. Shroder, Jr., Ph.D., Utah, 1967, Professor—geology, tropical and periglacial geomorphology, East Africa, Afghanistan

Philip E. Vogel, Ph.D., Nebraska-Lincoln, 1960, Professor—historical, agricultural, United States, history and philosophy of geography

Stephen J. White, ABD, New Mexico Institute of Mining and Technology, Instructor—geochemistry, mineralogy, petrology

Joseph S. Wood, Ph.D., Pennsylvania State, 1978, Assistant Professor—human geography, cultural landscapes of North America, historic preservation

University of Nevada Reno

GEOGRAPHY DEPARTMENT

DATE FOUNDED: 1957 GRADUATE PROGRAM FOUNDED: 1980

DEGREES OFFERED: M.S. in Land Use Planning Policy

GRANTED 7/1/81-6/30/82: 0

GRADUATE STUDENTS IN RESIDENCE: 10

CHAIRMAN: Christopher H. Exline

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Christopher H. Exline, Geography Department, University of Nevada, Reno, Nevada 89557 Telephone (702) 784-6995

PROGRAMS AND RESEARCH FACILITIES: The Master's degree is offered in Land Use Planning and Policy. The program is interdisciplinary and involves the faculties and resources of the Departments of Agricultural and Resource Economics, Anthropology, Civil Engineering, Economics, Political Science, Renewable Natural Resources, and Geography.

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The Geography Department houses a complete weather station, an extensive map collection, a well-equipped cartography laboratory (including a ZTS system), and a laboratory equipped for the study of physical geography—especially climatology and weather modification. The Department is developing facilities for computer mapping and the analysis of remotely sensed data.

The University is comprised of the full range of programs and facilities found in land-grant institutions. The University Library contains an excellent journal collection.

Reno is uniquely situated for the study of Land Use Planning. Located 30 miles from the capital of the nation's most rapidly growing state, Reno offers access to the alpine and recreational environments at Lake Tahoe, high deserts, and basin and range, and is a four-hour drive from the San Francisco Bay Area.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. A minimum grade-point average of 3.0, as well as completion of the Graduate Record Examination, are required for admission. There are, at present, no financial aids for this program; however, research assistantships may be available in the future.

STAFF:

Christopher H. Exline, Ph.D., UC, Berkeley, 1978, Associate Professor and Chairman—urban, planning, cartography, remote sensing

John W. James, M.S., Oregon, 1962, Lecturer—climatology, weather modification, environmental studies

Earl W. Kersten, Ph.D., Nebraska, 1961, Professor—historical, economic, resources, physical

Terrill J. Kramer, Ph.D., Illinois, 1973, Associate Professor—cultural, Middle East, cartography

University of New Mexico

GEOGRAPHY DEPARTMENT

GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A.

GRANTED 7/1/81–6/30/82: 2

GRADUATE STUDENTS IN RESIDENCE: 17
NOT IN RESIDENCE: 3

CHAIRMAN: Rodman E. Snead

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Assistant Professor Dennis E. Fitzsimons, Geography Department, University of New Mexico,

Albuquerque, New Mexico 87131
Telephone (505) 277-5041

PROGRAMS AND RESEARCH FACILITIES: The Department offers a considerable range of courses and thesis direction in systematic and regional geography. The fields with greatest depth are: climatology, cartography, cultural geography, urban geography, geomorphology, remote sensing, Southwestern U.S., Latin America, Europe, Africa, and Southern Asia. The Department is an active participant in the University's strong program of Inter-American Affairs. Library holdings are good, particularly with respect to Arid Lands and Latin American materials.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on the semester system.

Each application is reviewed individually, but in general an overall undergraduate average of near B and a full B average in undergraduate work in geography are necessary for admission to the program.

Thesis and non-thesis plans are offered. Candidates for the degree must pass a reading examination in a foreign language, or complete successfully two semesters of quantitative methods. Each candidate must pass an oral and written comprehensive examination.

Two teaching assistantships and one graduate assistantship are available. The stipend is $4950. Application for other types of financial aid may be made to the Graduate Office.

STAFF:

Elinore M. Barrett, Ph.D., UC, Berkeley, 1970, Professor—cultural-historical, Latin America

Iven Bennett, Ph.D., Boston, 1962, Professor—climatology, United States and Canada

Bradley T. Cullen, Ph.D., Michigan State, 1980, Assistant Professor—economic, quantitative methods

Dennis E. Fitzsimons, Ph.D., Kansas, 1981, Assistant Professor—cartography, field methods

Stanley A. Morain, Ph.D., Kansas, 1970, Associate Professor—biogeography, geography of soils, remote sensing

Richard E. Murphy, Ph.D., Clark, 1957, Professor —cultural, political, Europe

Rodman E. Snead, Ph.D., Louisiana State, 1963, Professor and Chairman—geomorphology, map reading and air photo interpretation, Middle East, South Asia

Stuart H. White, Ph.D., Wisconsin, 1981, Assistant Professor—Latin America, conservation, resources

Jerry L. Williams, Ph.D., Oregon, 1977, Assistant Professor—urban, land use planning, Africa

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TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Spear, Lawrence. "A Locational Analysis of the Distribution of Retail Food Stores with Respect to Residential Population Density in Albuquerque, New Mexico, 1970," 1982.

University of North Carolina, Chapel Hill

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1936 GRADUATE PROGRAM FOUNDED: 1936

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 4 M.A.

GRADUATE STUDENTS IN RESIDENCE: 28 M.A. 8 Ph.D.
NOT IN RESIDENCE: 7 M.A. 7 Ph.D.

CHAIRMAN: Richard J. Kopec

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Richard J. Kopec, Chairman, Department of Geography, UNC-Chapel Hill, 203 Saunders Hall 043-A, Chapel Hill, North Carolina 27514
Telephone (919) 962-8901

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers both M.A. and Ph.D. degrees. Intensive training is offered in urban-economic, population-medical, physical environment and cartographic fields. Emphasis is placed on analysis of problems which have an applied aspect and consequently have implications for policy development. Programs are tailored to the student's interests and normally include courses in other departments such as economics, city and regional planning, sociology, political science, epidemiology, or environmental science and engineering.

Students have access to the facilities of the Institute for Research in Social Science, Institute of Latin American Studies, Institute of Government, Carolina Population Center, Institute of Statistics and the Water Resources Research Institute. Cooperative programs among the University of North Carolina, Duke University and North Carolina State University permit use of their combined library holdings, courses, and facilities. IBM System 360/75 and 370/165 computers are available through the Computation Center on campus and are linked to the Department by Tektronix, Apple II, TSR-80, and Teleray remote terminals. Cartographic facilities include a computer graphics room equipped with two micro-computers (a Tektronix 4051 and an Apple II), a Bendix Datagrid Digitizer, two plotters, a printer and other devices. The nearby Research Triangle Park provides a unique complement of private and governmental research facilities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates under the semester system. Several University fellowships are available for first-year students with superior academic records.

Departmental graduate assistantships are awarded on a competitive basis as are research assistantships provided by the various centers and institutes. These assistantships usually carry in-state tuition. Departmental assistantships normally require the recipient to teach discussion sections of introductory courses. Part-time teaching of extension courses in nearby colleges also may be available to qualified applicants. Presently, 25 graduate students are financially supported through the Geography Department.

Forms for admission to the Graduate School and for financial assistance are obtained directly from the Graduate School Admissions Office, Bynum Hall 008-A, University of North Carolina, Chapel Hill, North Carolina 27514.

Two copies of all undergraduate and graduate transcripts and scores from the general aptitude section of the Graduate Record Examination are a part of the application. Prospective students should include a brief one- to two-page statement explaining their purposes and goals in undertaking graduate study in geography.

February 1st is the deadline for applications and notification of fellowship awards is sent out shortly thereafter. Applications for admission without aid will be considered until late spring.

STAFF:

David G. Basile, Ph.D., Columbia, 1964, Professor Emeritus—economic resources, Latin America

Stephen S. Birdsall, Ph.D., Michigan State, 1968, Professor—social, transportation, North America

Clyde E. Browning, Ph.D., Washington, 1958, Professor—urban, South, quaternary economic

John D. Eyre, Ph.D., Michigan, 1951, Professor—political, Asia

John W. Florin, Ph.D., Penn State, 1971, Associate Professor—population, medical, historical Anglo-America

Wilbert M. Gesler, Ph.D., North Carolina-Chapel Hill, 1978, Assistant Professor—medical, quantitative methods, Africa

Arthur J. Hawley, Ph.D., Michigan, 1968, Assistant Professor—food resources, water resources, remote sensing, field methods

Richard J. Kopec, Ph.D., Clark, 1965, Professor and Chairman—climatology, cartography

Melinda S. Meade, Ph.D., Hawaii, 1974, Associate Professor—medical, population, Southeast Asia

Barry M. Moriarty, Ph.D., Michigan State, 1970, Professor—urban, location theory, microspatial behavior

Peter J. Robinson, Ph.D., McMaster, 1972, Associate Professor—meteorology, climatology

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Adams, Keith Warren. "The Effects of Land Value on Farm Plot Subdivision and Consolidation: Didyma, Greece, 1936-78," 1981. Mf., Univ. Microfilms.

Chaffee, John D. "Manufacturing Plant Locations in North Carolina: 1969-1974," 1981. Mf., Univ. Microfilms.

Jennings, James Jay. "Network Structure and Route Speed: Intraurban Accessibility in Washington, D.C.," 1981. Mf., Univ., Microfilms.

Smith, Cheryl A. "Changing Patterns of Urban Residential Segregation: 1950-1970," 1981. Mf., Univ. Microfilms.

University of North Carolina at Charlotte

DEPARTMENT OF GEOGRAPHY AND EARTH SCIENCES

DATE FOUNDED: 1965 GRADUATE PROGRAM FOUNDED: 1973

DEGREES OFFERED: M.A.

GRANTED 7/1/81–6/30/82: 4

GRADUATE STUDENTS IN RESIDENCE: 21
NOT IN RESIDENCE: 7

CHAIRMAN: Alfred W. Stuart

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Graduate Advisory Committee, Department of Geography and Earth Sciences, University of North Carolina at Charlotte, UNCC Station, Charlotte, North Carolina 28223
Telephone (704) 597–2293

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography and Earth Sciences offers an M.A. degree that is strongly oriented to the application of geographic concepts and methods to the contemporary world. Applications of cartography, computerized graphics, quantitative methods and remote sensing are emphasized. Major facilities include a fully equipped cartography lab with three darkrooms and a terminal room that houses the computerized Regional Information System, a joint undertaking with the Urban Institute. Graduates of the program are prepared to work as professionals in areas such as urban and regional planning research, locational analysis, community college teaching, marketing research, cartography, and environmental problems. Most students are placed with a local company or agency, in a directed internship in lieu of the traditional thesis research. Each internship student completes a research project that is the basis for a final thesis-type report.

Student programs are individually tailored, and up to one-third of courses can be taken in related fields.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates under the semester system. Teaching assistantships carry stipends of $4500 and remission of the nonresident portion of tuition is usually available. Part-time teaching is sometimes available as is employment in the departmental cartographic lab. Students on internships receive a stipend that is usually more than that paid to teaching assistants. Application forms should be obtained from the Director of Graduate Studies, University of North Carolina at Charlotte, UNCC Station, Charlotte, North Carolina 28223, or from the Department. An official transcript of all previous academic work is required plus scores from either (1) the general aptitude section of the Graduate Record Examination, or (2) the Miller Analogies Test and the Doppelt Mathematical Reasoning Examination. An undergraduate geography major is not required, but those students who are deficient in the basic concepts and methods of geography will be required to take prerequisite coursework.

Applications for teaching assistantships should be received by March 1. Awards are announced by about April 1. Applications for admission without aid are considered until one month prior to the beginning of any semester. Financial aid is sometimes available beginning in the Spring semester as well.

FULL-TIME AND PART-TIME STAFF:

John F. Bender, Ph.D., SUNY at Stony Brook, 1980, Assistant Professor—geochemistry, petrology

James W. Clay, Ph.D., UNC Chapel Hill, 1969, Professor and Director, Urban Institute—resources, Latin America, environment, cartography

Owen J. Furuseth, AICP, Ph.D., Oregon State, 1978, Assistant Professor—land use planning, environmental impact analysis, man-land studies

Gail G. Gibson, Ph.D., New Mexico, 1975, Assistant Professor—stratigraphy, sedimentology

Gerald L. Ingalls, Ph.D., Michigan State, 1973, Associate Professor—political, urban, crime

Sallie M. Ives, Ph.D., Illinois, 1977, Assistant Professor—urban, social cognition, social impact analysis

J. Dennis Lord, Ph.D., Georgia, 1970, Professor—urban-economic, marketing, quantitative

Walter E. Martin, Ph.D. candidate, Tennessee, Lecturer—cultural, historical, physical

Nelson R. Nunnally, Ph.D., Illinois, 1965, Professor—physical, quantitative methods, remote sensing (on leave, 1982-83)

Douglas M. Orr, Jr., Ph.D., UNC Chapel Hill, 1968, Professor and Vice Chancellor for Research and Public Service—political, cultural, Europe

Gerald F. Pyle, Ph.D., Chicago, 1970, Professor—urban, medical

Norman W. Schul, Ph.D., Syracuse, 1962, Professor and Special Assistant to the Chancellor—Asia, economic

Jefferson L. Simpson, M.Ed., UNC Charlotte, 1974, Lecturer and Staff Cartographer—cartography

Paul D. Smith, M.A., Michigan State, 1980, Lecturer and Director of Regional Information System—computer graphics

Donald Steila, Ph.D., Georgia, 1971, Associate Professor—soils, climatology

Alfred W. Stuart, Ph.D., Ohio State, 1966, Professor and Chairman—the South, manufacturing, polar regions

Taz Tally, Ph.D., UC, Santa Barbara, 1980, Assistant Professor—geomorphology, environmental geology

Wayne A. Walcott, Ph.D., Illinois, 1974, Associate Professor—transportation, industrial, location theory

Additional faculty to be appointed.

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Friedenreich, Catherine J. "Development Strategies for North Graham Street Area of Fourth Ward, Charlotte, North Carolina," 1982.

Knollmeyer, Marc. "Geographic Data System," 1982.

University of North Dakota

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1884 GRADUATE PROGRAM FOUNDED: 1940

DEGREES OFFERED: M.A., M.S., M.Ed.

GRANTED 7/1/81-6/30/82: 3

GRADUATE STUDENTS IN RESIDENCE: 17
NOT IN RESIDENCE: 8

CHAIRMAN: Kang-tsung Chang

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Kang-tsung Chang, Department of Geography, University of North Dakota, Grand Forks, North Dakota 58202
Telephone (701) 777-4246

PROGRAMS AND RESEARCH FACILITIES: Graduate programs available include the Master of Arts and Master of Science degrees (thesis required) and the Master of Education degree (non-thesis). Designed to prepare graduate students for doctoral study or for a professional level career in government, industry, or education, the geography curriculum is oriented to professional competence in the discipline. The graduate student in geography is expected to develop both a systematic and a regional interest, basic research tools and techniques, and a knowledge of geographic theory and concepts.

The Department of Geography operates the U.S. National Oceanographic and Atmospheric Service Weather Station at Grand Forks complete with evapotranspiration and meteorological instrumentation including air quality surveillance monitors. The Department maintains an extensive collection of climatic data for the Northern Plains region and is a depository for the Army Map Service. The departmental library contains a large topographic and wall map collection as well as selected books and periodicals. In addition to well-equipped cartographic, photographic, computer, and statistical facilities, the Department houses the University of North Dakota Institute for Remote Sensing.

Research reflecting the interests of individual faculty members includes systematic and topical aspects of geography. Technique interests include cartography, computer graphics, air photo interpretation,remote sensing, quantitative applications and field techniques. Regional interests extend over much of the world although completed master's theses reflect an emphasis on the Northern Great Plains region.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The graduate program in geography at the University of North Dakota has been developed with the presumption that entering students normally would have successfully completed an undergraduate major and hold a Bachelor's degree in geography from a recognized institution. However, outstanding applicants are evaluated on an individual basis and those with limited backgrounds in geography but a distinguished record in another discipline may be accepted on a provisional basis with the understanding that deficiencies would be remedied early in the graduate program. Admission to approved status for graduate work in geography requires a GPA of at least 3.00 in all undergraduate work and a minimum of 18 semester credits of undergraduate work in geography (at least one course in each of the following fields: physical, cultural, regional, and techniques) plus 6 credits in fields cognate to geography.

STAFF:

Ted J. Alsop, Ph.D., Oregon State, 1979, Assistant Professor—natural environments, climatology, remote sensing, Latin America

Ralph C. Brown, Ph.D., Syracuse, 1964, Professor—economic, rural, population, political, map reading, North Polar Region, Africa, North America

Kang-tsung Chang, Ph.D., Clark, 1971, Professor—cartography, spatial analysis, computer applications

William A. Dando, Ph.D., Minnesota, 1969, Professor—agriculture, field methods, physical, meteorology, climatology, remote sensing, U.S.S.R., Eastern Europe

Floyd C. Hickok, A.B.D., U.C., Davis, 1978, Research Fellow and Staff Cartographer—cartography, computer graphics, agriculture, North America

Roland D. Mower, Ph.D., Kansas, 1971, Associate Professor—agriculture, land use, remote sensing, conservation, Latin America, cultural, physical, meteorology

Douglas C. Munski, Ph.D., Illinois, 1978, Assistant Professor—historical, geographic education, North America, cultural, urban, North Dakota

John W. Wyckoff, Ph.D., Utah, 1980, Assistant Professor—remote sensing, biogeography, land use, air photo interpretation, field methods, environmental impact analysis

EMERITUS FACULTY:

Bernt L. Wills, Ph.D., Northwestern, 1953, Professor of Geography

VISITING FACULTY:
Wei Huang, Wuhan College of Geodesy, Photogrammetry and Cartography, Wuhan, China—cartography

TITLES OF THESES COMPLETED 7/1/81-6/30/82:
Master's:
Holler, Bill. "Recreation Planning: A User-Oriented Study in Grand Forks, North Dakota," 1982.
Narloch, Randal L. "Sunflower in North Dakota: A Spatial Diffusion Analysis," 1981.
Sexton, Stephen G. "A Geographical Study of Chinch Bug Infestations in Eastern Kansas," 1982.

North Texas State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1920 GRADUATE PROGRAM FOUNDED: 1978

DEGREES OFFERED: M.S., M.P.A.

GRANTED 7/1/81-6/30/82: 2

GRADUATE STUDENTS IN RESIDENCE: 10

CHAIRMAN:

FOR CATALOG AND FURTHER INFORMATION WRITE TO: F. Andrew Schoolmaster, Graduate Coordinator, Department of Geography, North Texas State University, Denton, Texas 76203
Telephone (817) 565-2091

PROGRAMS AND RESEARCH FACILITIES: Two programs are offered: (1) *Master of Science in Interdisciplinary Studies: Regional Science and Planning*—The Master of Science degree offered through the Department of Geography also draws upon courses in economics, sociology, real estate, and political science. The program meets the selective needs of professional planners in both the public and private sectors, in particular spatial planning and development at the regional and local level, with emphasis on urban and economic patterns. The program provides a solid foundation in spatial theory and practical-technical skills, including computer applications and mapping and quantitative methods. An internship is optional in the 36-hour program. (2) *Master of Public Administration: Urban and Regional Planning*—The Departments of Geography and Political Science jointly offer a graduate track in Urban and Regional Planning, leading to the degree of Master of Public Administration. This program prepares planners to function effectively within a governmental system. Focus is on spatial analysis in the planning process. The 36-hour program includes an internship, plus 15 hours each of courses and seminars in geography and political science.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. *Admission:* Applicants must submit scores on the Graduate Record Examination. No specific number of undergraduate hours in geography is required for admission to the M.S. program, but remedial undergraduate courses may be necessary in individual cases. Admission to the M.P.A. program requires completion of at least 6 undergraduate hours in geography and 12 in political science. *Financial Assistance:* For full-time on-campus students, teaching assistantships are available.

STAFF:

John L. Bean, Ph.D., Pittsburgh, 1967, Associate Professor—computer graphics, urban regional science

Stephen A. Hall, Ph.D., Michigan, 1975, Assistant Professor—environmental planning

William M. Holmes, Ph.D., Texas, 1975, Assistant Professor—cartography, rural land use

F. Andrew Schoolmaster III, Ph.D., Kent State, 1979, Assistant Professor—recreational geography, quantitative methods

Northeastern Illinois University

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL STUDIES

DATE FOUNDED: 1961 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A., Geography and Environmental Studies
M.A., Geography and Environmental Studies: Urban Land-Use Planning

GRANTED 7/1/81–6/30/82: 7

GRADUATE STUDENTS IN RESIDENCE: 79
NOT IN RESIDENCE: 0

CHAIRPERSON: Barbara J. Winston

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Karl M. Kriesel, Graduate Coordinator, Department of Geography and Environmental Studies, Northeastern Illinois University, 5500 N. St. Louis Avenue, Chicago, Illinois 60625
Telephone (312) 583–4050, ext. 780

PROGRAMS: Course requirements include 33 semester hours tailored to the individual's program and career interests. The sequence leading to an M.A. in Geography and Environmental Studies is designed to train persons for positions in education, industry, government, environmental interpretation, and other areas where geographers and environmentalists are needed. The sequence in Urban Land-Use Planning is designed to train city planners specializing in land-use. Internships are required in the Urban Land-Use Planning Sequence. A graduate assistantship and merit tuition waivers are available.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Students must fulfill requirements for admission to the Graduate College, must have at least 15 hours in geography, or may be admitted conditionally with 6 semester hours in geography and must remove the deficiency. Contact Dean, Graduate College, for financial aid information.

STAFF:

C. Wallace Dierickx, Ph.D., Northwestern, 1955, Professor—economic, Africa, comparative world cultures

Robert F. Easton, M.A., Northwestern, 1967, Assistant Professor—physical, geomorphology, climatology

William L. Howenstine, Ph.D., Michigan, 1959, Professor—natural resources policy, planning, and management; environmental interpretation; population policy

Ying-Cheng Kiang, Ph.D., Columbia, 1955, Professor—urban, Chicago, Asia

Karl M. Kriesel, Ph.D., Michigan, 1970, Professor—cultural, political, scope and philosophy of geography, planning

William Millard, Ph.D., Minnesota, 1969, Associate Professor—recreation, conservation, urban historic preservation

Musa Qutub, Ph.D., Iowa State, 1969, Professor—physical, hydrology and water resources, environmental education

Lowry Taylor, M.A., Northwestern, 1975, Assistant Professor—quantitative and computer methods, cartography, regional development

Barbara Winston, Ph.D., Northwestern, 1974, Professor and Chair—environmental education, environmental perception, geographic education

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Bock, Judith. "Cognitive Development and Map Skills," 1981.

Jung, Margaret and Peter. "Master Management and Interpretive Plan for Silver Springs Park," 1981.

Plain, Maureen R. "Environmental Education Curriculum for Intermediate Grades," 1981.

Records, Ruth A. "The Roles of the Natural Environment in the Development of Effective Oral Communication," 1981.

University of Northern Colorado

GEOGRAPHY DEPARTMENT

DATE FOUNDED: 1968 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.A. in Social Science, D.A. (Doctor of Arts) in Geography

GRANTED 7/1/81-6/30/82: 1 M.A. 0 D.A.

GRADUATE STUDENTS IN RESIDENCE: 7 M.A. 6 D.A.
NOT IN RESIDENCE: 4 M.A. 10 D.A.

CHAIRMAN: Steven L. Scott

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Steven L. Scott, Chairman, Geography Department, University of Northern Colorado, Greeley, Colorado 80639
Telephone (303) 351-2715

PROGRAMS AND RESEARCH FACILITIES: *Doctor of Arts*—The Doctor of Arts degree is designed for those interested in creative teaching at the junior (community) or senior college level with a complementary commitment to research. Most course work is in geography; however, based upon individual needs and interests, the program is adequately flexible and the opportunity to work in supportive areas is strongly encouraged. Graduate level course work in pedagogy and a supervised teaching experience prepare the candidate for a college teaching career.

Research training culminates in a dissertation based upon original independent investigation of a geographic problem, a teaching strategy or technique pertinent to geography, or an original synthesis and evaluation of materials potentially valuable to college teaching in the discipline. *Master of Arts*—The Geography Department offers a Master of Arts degree in social science with a concentration in geography. The program is flexible and may be designed as a terminal degree or as a foundation for additional graduate study.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates year-round on the quarter system. Students may enter the program at the beginning of any quarter. An appropriate baccalaureate degree from an accredited institution and a formal application to the Office of the Graduate School are required for admission. Students in need of financial assistance to meet educational expenses are invited to correspond with the Financial Aids Office and Geography Department.

STAFF:

David B. Cole, Ph.D., Colorado, 1975, Associate Professor—geographic education, social geography, population

Charles O. Collins, Ph.D., Kansas, 1973, Associate Professor—Mexico and Caribbean, population, agriculture, cultural

John L. Dietz, Ph.D., Syracuse, 1970, Professor—economic, Anglo-America, Great Plains, U.S.S.R.

Kevin C. Kearns, Ph.D., St. Louis, 1966, Professor—political, South America, Ireland

Katherine L. Kutsche, Ph.D., Indiana, 1978, Assistant Professor—urban, transportation, planning

Paul L. Lehrer, Ph.D., Nebraska, 1962, Professor—physical, soils, Africa, western Europe

Richard K. Ormrod, Ph.D., Pennsylvania State, 1974, Associate Professor—recreation, man-environment, Caribbean

Steven L. Scott, D.A., Northern Colorado, 1973, Associate Professor—cartography, Anglo-America, Great Plains

Northern Illinois University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1968 **GRADUATE PROGRAM FOUNDED: 1968**

DEGREES OFFERED: M.S.

GRANTED 7/1/81-6/30/82: 8

GRADUATE STUDENTS PART-TIME: 22
FULL-TIME: 17

CHAIRMAN: Donald W. Maxfield

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Prof. Donald W. Maxfield, Chairman, Department of Geography, Northern Illinois University, DeKalb, Illinois 60115
Telephone (815) 753-0631

PROGRAMS AND RESEARCH FACILITIES: A student who elects a major in geography leading to the Master of Science degree arranges a program of courses totaling a minimum of 30 semester hours in consultation with his/her adviser. This program will include a course in research design, and usually, a total of 20 semester hours of geography courses. Students may choose to write a thesis or elect the nonthesis option. Additional requirements include: (1) passing a course in advanced quantitative techniques or passing a reading knowledge examination in a modern foreign language appropriate to the student's research interests or satisfactory completion of a course in advanced field methods. The advanced field methods option is intended only for individuals teaching or planning to teach at the elementary or secondary levels, and (2) passing a comprehensive written examination.

Special facilities include laboratories for studies in computer cartography, climatology, meteorology, remote sensing, and soils. The Department has two computer terminals. The Cartographic Laboratory is equipped with a Calcomp 663 drum plotter, 770 tape drive, Altek digitizer, Bausch and Lomb zoom transfer scope, Kelsh plotter, Diatype phototypesetting unit, Brown 3n1 process camera, and a photographic darkroom. A student-run weather station is equipped with Service A teletype and National Weather facsimile circuits. Additional equipment includes a variety of air quality monitoring instruments, radar facsimile receiver, and a low-altitude tethered balloonsonde. The University AMDAHL V7 and CDC CYBER 170 computers are accessible to any graduate student. In addition to the facilities of a rapidly growing University library, a map library with holdings of 139,000 maps and over 900 atlases is conveniently located.

The Department of Geography has developed staff strength in four clusters: applied meteorology/climatology, environmental management, applied urban/economic, and area studies. Graduate course groupings include applied meteorology, agro-climatology, climatic change, and environmental quality, evaluation and management. Other examples are programs in planning that include growth management, locational analysis, and the development of mapping systems for local and regional agencies. In addition, Geography participates in the programs of the Center for Southeast Asian Studies and the Center for Governmental Studies. The location of the University relative to the Chicago and Rockford metropolitan areas provides an impressive range of research opportunities in urban studies, planning, and environmental management.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: N.I.U. operates on a semester system. Admission as a graduate student requires a bachelor's degree from an accredited college or university, a GPA of at least 2.5 (4-point system), and approval of the Department of Geography. All prospective graduate students must take the Graduate Record Examination (verbal and quantitative) prior to admission.

Assistantships and fellowships carry stipends to $4500 for the academic year plus waiver of registration and out-of-state fees. Applications for graduate assistantships and fellowships for 1983-84 should be sent prior to February 15, 1983. Geography also offers a variety of internships with planning agencies and industry in the northern Illinois area. These internships provide a stipend and, in some cases, waiver of tuition and summer support. Students interested in internships should direct inquiries to the Department Chairman. N.I.U. does not discriminate on the basis of the race, creed, color or national origin of any applicant.

STAFF:

Lloyd D. Black, Ph.D., Michigan, 1940, Professor—regional planning, development (foreign aid)

Kenneth L. Bowden, M.S. Ed., Northern Illinois, 1957, Assistant Professor—hydrology, water resources, physical

Alan L. Cole, Ph.D., Michigan, 1962, Associate Professor—applied meteorology, instrumentation and measurements

Richard E. Dahlberg, Ph.D., Wisconsin, 1959, Professor—cartography

C. Daniel Dillman, Ph.D., Michigan, 1968, Professor—Latin America, rural landscapes, physical

B. Ross Guest, Ph.D., Chicago, 1951, Professor—environmental management, U.S.S.R., Anglo-America

Daniel Huegel, Ph.D., Pennsylvania State, 1981, Assistant Professor—economic, urban, quantitative methods

Leonard J. Kouba, Ph.D., Boston, 1970, Associate Professor—conservation, physical, Africa

Cornelius J. Loeser, Ph.D., UCLA, 1965, Assistant Professor—cultural, East Asia

Donald W. Maxfield, Ph.D., Iowa, 1967, Associate Professor and Chairman—urban, remote sensing

A. Steven Messenger, Ph.D., Michigan State, 1966, Associate Professor—soils, forestry, biogeography

Clayton H. Reitan, Ph.D., Wisconsin, 1971, Associate Professor—meteorology, climatology

Allen Staver, Ph.D., Wisconsin, 1969, Associate Professor—dynamic meteorology, numerical weather prediction

Charles E. Trott, Ph.D., Ohio State, 1969, Associate Professor and Associate Dean, College of Liberal Arts and Sciences—urban, migration analysis, health planning, applied statistics

Jack R. Villmow, Ph.D., Wisconsin, 1955, Professor—climatology, meteorology, Eastern Europe, U.S.S.R.

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Bechely, Kenneth P. "The Cross Brothers Disposal/Recycling Facility: The Applicability of Illinois Hazardous Waste Regulations," 1981.

Cocklan-Vendl, Mary E. "Relationship between Un-Ionized Ammonia and Water Quality in Selected Illinois Streams," 1981.

Jensen, Viggo E. III. "An Evaluation of Several Methods of Atmospheric Trajectories," 1981.

Kann, Deirdre M. "The Effect of Spatial Variability of Latent Heat Release on the Movement and Growth of an Extratropical Cyclone," 1982.

Lawyer, David T. "A Simple Model to Predict Static Stability Change in Relation to Severe Weather Outbreaks," 1982.

Magnuson, Thomas L. "The Effect of Lake Michigan and the Urban Heat Island on the Temperature Climate of the Chicagoland Area: A Discriminant Analysis Approach," 1982.

Veselka, Thomas D. "Development and Application of a Mathematical Model to Assess Potential Impacts of SO_2 Point Sources on Vegetation," 1981.

University of Northern Iowa

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1959 **GRADUATE PROGRAM FOUNDED: 1969**

DEGREES OFFERED: M.A.

GRANTED 7/1/81–6/30/82: 1

GRADUATE STUDENTS IN RESIDENCE: 6
NOT IN RESIDENCE: 2

HEAD: Basheer K. Nijim

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Basheer K. Nijim, Head, Department of Geography, University of Northern Iowa, Cedar Falls, Iowa 50614
Telephone (319) 273–2772

PROGRAMS AND RESEARCH FACILITIES: The prospective student will especially benefit from the Department's offerings in planning and applied economic and urban geography, cartography, methodology (theoretical and quantitative), population studies, environmental and resource management, cultural, political, and rural geography. Regional emphases include Anglo-America, East Asia, the Middle East, and Europe.

The Department has separate labs for cartography, photography, and physical geography, and it has access to excellent computer facilities.

The program is flexible and provides extensive personal contact between the faculty and the students.

The Department publishes *Geographical Perspectives*, a semiannual journal.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. A graduate of an accredited undergraduate program may be admitted. A departmentally administered diagnostic examination is required of all new students. A minimum grade average of B must be maintained. Assistantships and other possibilities of financial support are available.

STAFF:

C. Murray Austin, Ph.D., Pennsylvania, 1971, Associate Professor—urban, economic, quantitative methods, theoretical, futures, geographic education

Roy Chung, M.A., Wisconsin-Madison, 1955, Associate Professor—population, theoretical, quantitative, developing areas

Robert E. Clark, Ph.D., Nebraska, 1974, Assistant Professor—cultural, rural settlement, historical geography of the United States, Europe, Anglo-America

James F. Fryman, Ph.D., North Carolina, 1981, Assistant Professor—population, political, air photo interpretation, cartography

Jonathan J. Lu, Ph.D., Washington, 1971, Professor—agricultural, economic, world food resources, East Asia, geography of the Bible

Basheer K. Nijim, Ph.D., Indiana, 1969, Professor—political, population, Middle East

Brenton M. Yarnal, Ph.D., Simon Fraser, 1982, Assistant Professor—climatology, Quaternary studies

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

McNeal, Sherman B. "Measuring Hazard Perception of Nuclear Power Plants: An Exploratory Study of the Duane Arnold Energy Center," 1982.

Northern Michigan University

DEPARTMENT OF GEOGRAPHY, EARTH SCIENCE, AND CONSERVATION

DATE FOUNDED: 1923 GRADUATE PROGRAM FOUNDED: 1969

DEGREES OFFERED: M.A., M.A. in Education

GRANTED 7/1/81-6/30/82: 2

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 13

HEAD: Jarl Roine

FOR CATALOG AND INFORMATION WRITE TO: Chairman, Graduate Programs Committee, Department of Geography, Earth Science, and Conservation, Northern Michigan University, Marquette, Michigan 49855
Telephone (906) 227-2500

PROGRAMS AND RESEARCH FACILITIES: The program is designed to provide for a broad range of interests leading to employment in teaching, business, and government service. The department is housed in a modern science building with excellent equipment. Available are a new growing library, field courses, computer facilities, and internships in planning.

ACADEMIC PLAN: Semester system plus intersession and summer program. *Admission Requirements:* Bachelor's degree from accredited institution. *Financial Aid:* Graduate Assistantships available.

STAFF:

Steven A. Carlson, Ph.D., Washington, 1977, Associate Professor—rural land-use planning, biophysical analysis, resources

Fillmore C. F. Earney, Ph.D., Michigan State, 1965, Professor—minerals, U.S.S.R., political

John P. Farrell, M.A., Michigan, 1955, Professor—cartography, field techniques, planning

Ivan J. Fende, M.A., Northern Michigan, 1964, Assistant Professor—conservation, teacher education

John D. Hughes, Ph.D., Northwestern, 1963, Professor—Great Lakes, geomorphology, shoreline processes

Alfred N. Joyal, Ph.D., Iowa, 1980, Assistant Professor—recreation, behavioral, quantitative methods

Bernard C. Peters, Ph.D., Michigan State, 1969, Professor—historical, environmental perception

Jarl Roine, M.A., Indiana, 1951, Professor—urban, economic, planning

Sten A. Taube, M.A., Georgia, 1963, Associate Professor—meteorology, economic, Latin America

Northwestern University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1945 GRADUATE PROGRAM FOUNDED: 1945

DEGREES OFFERED: Ph.D.

GRANTED 7/1/81-6/30/82: 1 Ph.D

GRADUATE STUDENTS IN RESIDENCE: 3 Ph.D.
NOT IN RESIDENCE: 1 Ph.D.

CHAIRMAN: Michael F. Dacey

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor John C. Hudson, Department of Geography, Northwestern University, Evanston, Illinois 60201
Telephone (312) 492-7030

PROGRAMS AND RESEARCH FACILITIES: Courses and seminars in the various areas of faculty specialization listed below are augmented with substantial course work in other departments and programs such as economics, industrial engineering, urban systems engineering, management and transportation. Programs of study are worked out individually for each student and permit flexibility within the basic focus of the department.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Admission is limited to mature students having a Master's degree in geography or a closely related field. The basic Ph.D. degree program consists of a three-year sequence of courses, seminars and dissertation research. There is emphasis on independent study supplemented by course work in cognate departments. Successful defense of an evaluation paper and a dissertation proposal, normally in the second year, admits the student to Ph.D. candidacy. Departmental financial support for the first three years of the program is available to qualified students; the stipend for 1982-83 is $5,700 plus full remission of tuition ($7,575). All students participate both as teaching and research assistants. Applicants seeking financial support are encouraged to submit GRE scores. Currently, there is no Master's degree program.

STAFF:

Michael F. Dacey, Ph.D., Washington, 1960, Professor of Geography and Geological Sciences—mathematical geography, spatial statistics, location theory

Edward B. Espenshade, Jr., Ph.D., Chicago, 1943, Professor Emeritus

John C. Hudson, Ph.D., Iowa, 1967, Professor—settlement, diffusion models, North America

Breandan O'Huallachain, Ph.D., Illinois, 1982, Assistant Professor—urban, transportation, quantitative techniques

Andrew R. Pickles, Ph.D., Wales, 1982, Assistant Professor—statistical methods, economic, planning

Peter A. Rogerson, Ph.D., SUNY Buffalo, 1981, Assistant Professor—economic, population

TITLES OF DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Roet, Jeffrey B. "Agricultural Settlement on the Dry Farming Frontier, 1900-1920," 1982. Mf., Univ. Microfilms.

The Ohio State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1907 GRADUATE PROGRAM FOUNDED: 1907

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 3 M.A., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 14 M.A., 23 Ph.D.
NOT IN RESIDENCE: 3 M.A., 4 Ph.D.

CHAIRPERSON: John N. Rayner

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. A. John Arnfield, Chairman, Graduate Committee, Department of Geography, The Ohio State University, 103 Administration Building, 190 North Oval Mall, Columbus, Ohio 43210-1361
Telephone (graduate program) (614) 422-7954, (other matters) (614) 422-2514

PROGRAMS AND RESEARCH FACILITIES: Programs of study stress theoretical and conceptual approaches to geographic problems. Methodologically, the emphasis is largely quantitative. Indeed, in the past, the department has been known primarily for its quantitative and analytical orientation. Although this focus remains strong, there is also a significant degree of activity in other directions, including institutional and historical approaches to geography, studies in a developing world context, political economy, policy studies and alternative geographic paradigms. Research problems undertaken by students may be of a fundamental or applied nature. The overall program is intended to be flexible enough to provide the geographer with an appropriate background to undertake a career in academia, private industry, consulting firms, government or research institutes.

Graduate level programs are offered in cartography, climatology, the geography of development, locational analysis, political geography, quantitative analysis, social-population geography, transportation geography and urban geography. Further details on any of these fields are available on request.

Research is supported by an excellent library system housing some 3.5 million volumes, 1 million microforms, and 145,000 map sheets. Current serial subscriptions number 25,000 series and include virtually all journals of value in geographic research. A computer-based circulation system provides access to catalog data and information on location and availability of materials via public terminals. Computer-based literature searches also are available.

University computer facilities are based on an Amdahl 470V6, a large central processing system which, with an interconnected IBM 4341, supports a large baseload of batch and interactive processing. The system supports advanced software and text editing systems, graphic CRT terminals and plotters. A large digitizing system also is available.

The department supports laboratories for work in cartography and climatology. A large range of meteorological instrumentation is available, including radiometers, humiditiy, temperature and wind profile systems, an infrared thermometer and a variety of analog and digital electronic recording devices. A facsimile machine circuit to the National Weather Service in Washington provides current forecasts, satellite imagery and other products. The departmental numerical cartography laboratory has several state-of-the-art graphic CRT terminals interfaced to the main university computing system as well as hardcopy units, a digitizing tablet, plotter and graphic printer. Conventional cartographic equipment also is available.

Teaching associates are provided with office space and access to services and facilities to support their instructional activities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID. *Academic Plan.* Quarter System. Research skills are assessed in the Master's program by means of a research paper. Course work includes a core group of seminars emphasizing theoretical understandings and quantitative skills. The Master's comprehensive examination stresses one of the fields of specialization of the department. The doctoral program is designed intentionally to permit advanced graduate students the flexibility to pursue their specialized interests. A seminar on the scope, nature and methodology of the discipline is the only required element. Major and minor fields are examined; the Ph.D. dissertation topic falls within one or both of these fields. Work in related disciplines is encouraged and Ph.D. minor topics in other departments are possible in certain cases. *Admission Requirements.* Minimal grade point average of 2.7 (A = 4.0) or equivalent for foreign applicants. All applicants must take the aptitude portion of the Graduate Record Examination. *Financial Aid.* Teaching associateships are available. The 1981-82 first year stipend (9 month contract) is $4824, plus tuition and fees. Summer teaching is available for qualified students. Additional sources of funding include University Fellowships and research assistantships. Applicants requesting funding are encouraged to complete admission procedures by February 1. Further details on degree requirements, admissions procedures and financial aid are available on request.

STAFF:

A. John Arnfield, Ph.D., McMaster, 1973, Associate Professor—climatology

J. William Bradfield, M.A., Kent State, 1966, Assistant Professor—(OSU Regional Campus, Mansfield, Ohio)

Lawrence A. Brown, Ph.D., Northwestern, 1966, Professor—population, urban, development, Latin America

S. Earl Brown, Ph.D., Wisconsin, 1957, Professor and Dean, Social & Behavioral Sciences—locational analysis, development (Europe)

Emilio Casetti, Ph.D., Northwestern, 1964, Professor—quantitative analysis, population, economic development

Victor Colombini, Ph.D., Boston, 1961, Associate Professor—(OSU Regional Campus, Lima, Ohio)

Kevin R. Cox, Ph.D., Illinois, 1966, Professor—political, social, urban

George J. Demko, Ph.D., Pennsylvania State, 1964, Professor—population, population distribution policy, regional development, socialist systems

Howard L. Gauthier, Ph.D., Northwestern, 1966, Professor—transportation

Vera L. Herman, M.A., Ohio State, 1947, Assistant Professor—physical, world regional

Henry L. Hunker, Ph.D., Ohio State, 1953, Professor—urban, industrial, resource analysis

Robert D. Klingensmith, Ph.D., Southern Illinois, 1975, Assistant Professor—(OSU Regional Campus, Newark, Ohio)

Nina S-N. Lam, Ph.D. Western Ontario, 1980, Assistant Professor—cartography, geographic information systems, locational analysis

Harold Moellering, Ph.D., Michigan, 1973, Associate Professor—numerical and analytical cartography, geographic information systems

Ellen Mosley-Thompson, Ph.D., Ohio State, 1979, Adjunct Assistant Professor—climatology, glaciology

Morton E. O'Kelly, Ph.D., McMaster, 1981, Assistant Professor—locational analysis, quantitative analysis

George P. Patten, Ph.D., Northwestern, 1955, Professor—tropical agriculture, development (Latin America, Africa)

John N. Rayner, Ph.D., Canterbury, 1965, Professor and Chairman—climatology, quantitative analysis

Jeffery C. Rogers, Ph.D., Colorado, 1979, Assistant Professor—climatology

Gregory S. Rose, Ph.D., Michigan State, 1981, Assistant Professor—(OSU Regional Campus, Marion, Ohio)

W. Randy Smith, Ph.D., York, 1978, Assistant Professor—urban, regional urban systems, urban historical

Frank C. Stetzer, Ph.D., Iowa, 1977, Assistant Professor—urban, quantitative

Edward J. Taaffe, Ph.D., Chicago, 1952, Professor—transportation, geographic thought, development (North America)

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Charnews, Mark Steven. "Destination Choice Set Composition," 1982.* Mf., Univ. Microfilms.

Day, Frederick Albert. "Family Planning in the Third World: Conceptual Considerations and an Application to Rural Thailand," 1982.* Mf., Univ. Microfilms.

Ohio University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1969 GRADUATE PROGRAM FOUNDED: 1971

DEGREES OFFERED: M.A., M.S.

GRANTED 7/1/81–6/30/82: 11

GRADUATE STUDENTS IN RESIDENCE: 20
NOT IN RESIDENCE: 4

CHAIRMAN: Frank E. Bernard

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Graduate Committee, Department of Geography, Ohio University, Porter Hall, Athens, Ohio 45701
Telephone (614) 594–5555

PROGRAMS AND RESEARCH FACILITIES: The Geography Department grants both the M.A. and M.S. degrees. The student may select one of two programs to obtain either degree: a thesis or a non-thesis track. The thesis track allows for some research specialization, usually requires two years to complete, and is designed for those continuing to the doctoral level. The non-thesis track allows for broad geographic training in several areas of emphasis: cartography, resource management, area studies, economic, cultural, physical, land use planning, and urban. There is a two-part comprehensive exam for this program.

Research facilities include a computing laboratory with CRT links to central IBM 370-44, a complete traditional cartographic production facility as well as computer cartographics capabilities, the Ohio Center for Remote Sensing with an ERDAS microprocessor for LANDSAT imagery, and the Scalia Laboratory for

Weather Analysis and Forecasting. In addition, Ohio University offers excellent opportunities for interdisciplinary coursework in international studies and environmental science.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:

Academic Plan: Quarter System. *Admission Requirements:* Bachelor's degree with a minimum grade point average of 2.75 (4.0 scale), Graduate Record Examination. *Financial Aid:* Graduate teaching assistantships of $4100 for nine months plus full tuition scholarship. Appointment includes fee waivers for summer sessions before and after the term of employment. Several tuition scholarships are also available. Financial assistance deadline is March 1.

STAFF:

Nancy R. Bain, Ph.D., Minnesota, 1973, Associate Professor—population, economic, urban

Frank E. Bernard, Ph.D., Wisconsin, 1968, Professor—resources, agriculture, Africa

Hubertus H. L. Bloemer, Ph.D., Union, 1977, Assistant Professor—cartography, remote sensing, transportation

James L. Cobban, Ph.D., UC, Berkeley, 1970, Associate Professor—cultural, land use planning, Southeast Asia

Ronald H. Isaac, Ph.D., Southern Illinois, 1974, Assistant Professor—bioclimatology, quantitative methods, computer mapping

Bob J. Walter, Ph.D., Wisconsin, 1968, Professor—political, geographic thought, Africa

Hubert G. H. Wilhelm, Ph.D., Louisiana State, 1968, Professor—settlement, historical, Anglo-America

Lynden S. Williams, Ph.D., Kansas, 1973, Associate Professor—population, Latin America, urban

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Master's:

Abok, Wilson Okumu. "The Impact of Paddy Rice Cultivation on the Ecology of Malarial Mosquitoes in the Ahero Irrigation Scheme, Kenya," 1982.

Cox, Ron O. "Population Change in Nebraska, 1970-1980: A Continuation of Urban-Oriented Growth," 1981.

Dunn, Paulette. "Internal Migration and Population Redistribution in Jamaica, 1881-1970," 1981.

Iliya, Mohammed A. "Diffusion of Agricultural Innovations in the Sokota Rima Basin of Nigeria: A Study of the Bakolori Project," 1981.

Maghenda, Marianne. "Forest Change in the Mau Region of Kenya: An Investigation Using Remote Sensing," 1982.

West, Max L. "Determinants of Effective National Territory: The Select Cases of Bolivia, Peru, Ecuador and Colombia," 1982.

Oklahoma State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1940 GRADUATE PROGRAM FOUNDED: 1947

DEGREES OFFERED: M.S.

GRANTED 7/1/81-6/30/82: 8 M.S., 1 Ed.D.

GRADUATE STUDENTS IN RESIDENCE: 18 M.S.
NOT IN RESIDENCE: 1 M.S., 1 Ed.D.

HEAD: Richard D. Hecock

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Richard D. Hecock, Department of Geography, Oklahoma State University, Stillwater, Oklahoma 74078
Telephone (405) 624-6250

PROGRAMS AND RESEARCH FACILITIES: Program of study leads to M.S. degree. Department offers plans of study with emphasis in social, historical, or physical geography, as well as resource management and applications of remote sensing. Interdisciplinary options are available in Environmental Sciences and Historic Preservation. Cognate course work is often taken in economics, engineering, biological sciences, architecture, agricultural economics, and statistics. All plans of study for the M.S. require thesis or a report. Field experience required. Credit for internship experience may be earned. The University Cartographic Service and the Center for the Applications of Remote Sensing are affiliated with the Department. The latter is equipped with state-of-the-art computing, plotting, digitizing, and image processing equipment, and offers students an opportunity to learn and practice modern techniques of interpretation and analysis of a wide range of remotely sensed images. The University Library has ample geography and periodical holdings, as well as good map, aerial photography, and documents collections. Students have access to the University's IBM 370/158 computer, its peripheral equipment, and extensive software and graphics packages through remote terminals available within the department.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system, including summer. Undergraduate grade point average of 3.0 (4.0 system) or better normally required for admission. Teaching and research assistantships, planning internships and other stipends range from $4500 to $5000 per 9-month academic year and include a waiver of out-of-state tuition rates. Summer assistantships may also be available. Special minority assistantships and tuition scholarships are available for Oklahoma residents.

STAFF:

W. A. "Tony" Blanchard, M.S., Louisiana State, 1979, Research Associate—Center for Applications of Remote Sensing

David L. Butler, Ph.D., Kansas, 1982, Assistant Professor—physical, geomorphology, climatology

George O. Carney, Ph.D., (History), Oklahoma State, 1971, Professor—historical, cultural, music, United States

Jerry D. Croft, Ed.D., Tulsa, 1971, Associate Professor—geographic education, Europe

Robert C. Fite, Northwestern, 1951, Professor Emeritus—physical geography, meteorology, climatology

Mark S. Gregory, M.S., Penn State, 1975, Research Associate—Center for Applications of Remote Sensing

Keith D. Harries, Ph.D., UCLA, 1969, Professor—social, urban

Richard D. Hecock, Ph.D., Clark, 1966, Professor and Head—outdoor recreation, resource management, Asia

Herbert Kershaw, M.S., Oregon State, 1960, Professor Emeritus and Visiting Professor—meteorology, climatology, oceanography

George P. Malanson, Ph.D., UCLA, 1982, Visiting Assistant Professor—physical, biogeography, resource management

Gayle Maxwell, M.S., Georgia, 1964, Director, Cartography Service

Razia Nanji, M.Ed., McGill, 1972, Visiting Assistant Professor—Africa

Robert E. Norris, Ph.D., Iowa, 1970, Professor—political, quantitative methods, data processing

John F. Rooney, Jr., Ph.D., Clark, 1966, Professor—sport and recreation, resource management, United States

Stephen J. Stadler, Ph.D., Indiana State, 1979, Assistant Professor—climatology, meteorology, remote sensing

James H. Stine, M.S., Oklahoma State, 1953; Advanced Graduate Work, Washington, Associate Professor—economic and urban systems, location and interaction theory, cartography

Steven W. Tweedie, Ph.D., Syracuse, 1969, Associate Professor—computer techniques, socio-cultural, United States, global education

John D. Vitek, Ph.D., Iowa, 1973, Associate Professor—physical, geomorphology, natural hazards

Stephen J. Walsh, Ph.D., Oregon State, 1977, Assistant Professor and Director of Center for Applications of Remote Sensing—remote sensing, physical, resource management

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ed.D.:

Garrett, Michael Joe. "Geography in General Education Curriculum: An Analysis of the Current Role from a Historical Perspective," 1982.* Mf., Univ. Microfilms International.

Master's:

Berta, Susan Mary. "Feasibility of Utilizing Landsat Digital Data for the Identification of Rock Glaciers—Blanca Massif, South-Central Colorado," 1982.

Bunse, Larry Melvin. "Development of a Geographic Information System for Surface Coal Mine Management," 1982.

Craig, Claudia Ann. "Migration from Eastern Kentucky 1965 to 1970," 1982.

Kelly, Timothy Edward. "An Assessment of the Manufacturing Growth in the Nonmetropolitan Tennessee Valley Region, 1969-79," 1982.

Lord, Victoria Louise. "Evaluating Habitat Preference of the Nine-banded Armadillo *(Dasypus novemcinctus)* Using Roadkill Data," 1982.

Macias, William Luis. Report #1, "Comparing Three Data Techniques in Mapping Population Changes;" Report #2, "Distribution of Federal Aid to States: Justice or Inequality," 1982.

Mynar, Frank II. "Computer Enhancement of Landsat Digital Imagery for the Detection of Lineaments," 1982.

University of Oklahoma

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: (Ph.D.) 1965

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81–6/30/82: 3 M.A., 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 13 M.A., 9 Ph.D.
NOT IN RESIDENCE: 2 M.A., 15 Ph.D.

CHAIR: Neil Salisbury

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Admissions Committee, Department of Geography, University of Oklahoma, Norman, Oklahoma 73019
Telephone (405) 325-5325

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers opportunities leading to the M.A. and Ph.D. degrees with programs tailored to fit the interests and needs of each student. Although the department specializes in several traditional areas of the discipline, we encourage students to develop new and innovative approaches to geographic research and career development. On-going programs of research in both basic and applied areas provide students with the opportunity to obtain first-hand experience in geographic problem-solving. Among the areas of research concentration are: environmental assessment, climatic change and its impacts, geographic information systems, spatial organization and spatial modeling, natural resources, historical geography, spatial diffusion, and fluvial geomorphology.

Students have a chance to relate to a variety of strong University programs: courses and faculty in other departments (frequently with regional and city planning, law, history, geology, economics, sociology, anthropology, marketing, botany, and civil engineering), interdisciplinary programs (such as the Science and Public Policy Program and the Southwest Center for Human Relations Studies), and research offices (such as the Bureau of Government Research, the Bureau for Business and Economic Research, the Bureau of Water and Environmental Resources Research, the Oklahoma Geological Survey, the Oklahoma Climatological Survey, and the Oklahoma Biological Survey). Close connections are maintained with the Department of Geography at Oklahoma State University, which offers complementary activities and opportunities.

The Department is housed in the new Social Sciences Center. Its facilities include a full-service remote computing terminal in the building, linked to the university IBM 370-158 computer; two TSO lines; Tektronix 4010 and 4631; two 30-inch Calcomp plotters; a digitizer; a darkroom and cartographic production facilities, including a Brown 400 copy camera; and collections of maps, air photos, and other imagery.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates with two semesters and one eight-week summer session. Admission decisions are based on an evaluation of transcripts, letters of recommendation, GRE aptitude scores, and any other material that an applicant wishes to be considered. Graduate assistantships and other kinds of financial aid are available each year.

STAFF:

Marvin W. Baker, Jr., Ph.D., Syracuse, 1970, Associate Professor—urban, environmental policy, Latin America, Anglo-America

Charles E. Barb, Jr., Ph.D., Washington, 1974, Associate Professor of Civil Engineering and Geography—urban information systems, geocoding, computer graphics, urban transportation

Daniel R. Fesenmaier, Ph.D., Western Ontario, 1980, Assistant Professor—quantitative methods, spatial organization

James M. Goodman, Ph.D., Northwestern, 1963, Associate Professor—physical environments, geomorphology, Native American resources and land use in the American Southwest

John M. Harlin, Ph.D., Iowa, 1975, Assistant Professor—quantitative methods, climate, geomorphology

John A. Harrington, Jr., Ph.D., Michigan State University, 1980, Assistant Professor—biogeography, climatology, remote sensing

Edward J. Malecki, Jr., Ph.D., Ohio State, 1975, Associate Professor—urban systems, diffusion, urban and regional development, research methods

Richard L. Nostrand, Ph.D., UCLA, 1968, Associate Professor—historical, social and cultural geography of ethnic groups, Anglo-America, the American Southwest

Rebecca S. Roberts, Ph.D., Oregon State, 1982, Assistant Professor of Geography and Research Fellow, Science and Public Policy Program—natural resources, economic

Neil E. Salisbury, Ph.D., Minnesota, 1957, Professor—natural resources and resource use patterns, fluvial morphology and landscape systems

David Seamon, Ph.D., Clark, 1977, Visiting Assistant Professor—behavioral, urban social, philosophy of geography

Fred M. Shelley, Ph.D., Iowa, 1981, Assistant Professor—political, locational conflict analysis

Stephen M. Sutherland, Ph.D., Illinois, 1963, Associate Professor—climatic change, weather modification, physical

Gary L. Thompson, Ph.D., Michigan State, 1968, Associate Professor—economic, transportation, regional analysis, Soviet Union

Bret Wallach, Ph.D., UC, Berkeley, 1968, Associate Professor—cultural, historical, resources

EMERITUS STAFF:

Harry E. Hoy
John W. Morris
Ralph E. Olson

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

McKay, R. Reynolds. "Texas-Mexican Repatriation During the Great Depression," 1982.* Mf., University Microfilms.

Miles, Linda Jeanne. "Ralph Hall Brown: Gentlescholar of Historical Geography," 1982.* Mf., University Microfilms.

Pilgrim, Alan T. "Spatial Variability of Hydrologic Response on Naturally Vegetated Hillslopes in a Semi-arid Environment," 1981.* Mf., University Microfilms.

Master's:

Barrios, Eduardo A. "A Multivariate Statistical Taxonomy of the Climate of Venezuela," 1981.*

Burr, Timothy Allen. "Cost, Distance, and Seasonal Consumption: An Analysis of Residential Water Rates of Oklahoma City," 1981.*

Cantwell, Hal Dene. "The Changing Phytosociology of the Oak-Hickory Forest of the Ozark Mountains of Oklahoma," 1981.*

Oregon State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: 1952

DEGREES OFFERED: M.S., M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 15 Masters, 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 32 Masters, 8 Ph.D.
NOT IN RESIDENCE: 6 Masters, 5 Ph.D.

CHAIRMAN: Thomas J. Maresh

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Thomas J. Maresh, Department of Geography, Oregon State University, Corvallis, Oregon 97331
Telephone (503) 754-3141

PROGRAMS AND RESEARCH FACILITIES: The Department specializes in the fields of resource geography, environmental geography, physical geography, and applied economic geography. The typical graduate program contains a core major, research methodology, and a related minor. One language is required for the Ph.D. Minors may be partly or wholly in a second field of geography or may be integrated from the wide range of relevant disciplines and fields represented on this land grant university campus. Master's degree candidates may elect either a thesis or a nonthesis option.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Admission requirements:* 3.00 GPA in last two undergraduate years and three letters of recommendation. Quarter system. *Financial aid:* Teaching and research assistantships.

STAFF:

Robert E. Frenkel, Ph.D., UC, Berkeley—biogeography, conservation
Oliver H. Heintzelman, Ph.D., Washington, Professor Emeritus—recreation resources
Richard M. Highsmith, Jr., Ph.D., Washington, Professor Emeritus—agricultural, land resources use
Philip L. Jackson, Ph.D., Kansas—climate, agricultural land use
J. Granville Jensen, Ph.D., Clark, Professor Emeritus—biotic resources, resource geography of Mexico
A. Jon Kimerling, Ph.D., Wisconsin—cartography, remote sensing
Thomas J. Maresh, Ph.D., Illinois—economic, industrial, mineral
Gordon E. Matzke, Ph.D., Syracuse—biotic resources, zoogeography, conservation
Keith W. Muckleston, Ph.D., Washington—water resources
Mary Lee Nolan, Ph.D., Texas A&M—responses to hazards, recreation
Ray M. Northam, Ph.D., Northwestern—urban, transportation
James R. Pease, Ph.D., Massachusetts—land use planning, resource planning
Charles L. Rosenfeld, Ph.D., Pittsburgh—applied physical geography, hydrology, geomorphology

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Boss, Theodore. "Vegetation Ecology and Net Aerial Productivity of Freshwater Wetlands in Oregon," 1982.* Mf., Univ. Microfilms.

Roberts, Rebecca S. "The Effects of Large-Lot Zoning on the Single-Family Housing Market," 1982.* Mf., Univ. Microfilms.

Smith, H. Gregory. "Growth Modeling for Conifer Regeneration in the Northeastern Sierra Nevada of California," 1982.* Mf., Univ. Microfilms.

Master's:

Anderson, Sally. "The Invasion of Russian Thistles in the Winema National Forest," 1982.

Beach, Gary L. "Geographical Geomorphology: Historical Development, Contemporary Problems, and Future Prospects," 1982.

Bell, Allen L. "Oregon's Port Districts as an Element of Economic Development," 1982.

Bell, James W. "Side-Looking Airborne Radar Mapping of Wave Refraction Patterns at the Mouth of the Columbia River," 1982.

Bilton, Janet. "Comparison of Soil and Vegetation Map Delineation Shapes and Areal Correspondence," 1982.

Denkers, Douglas S. "Remote Sensing Methodology for Bioenvironmental Surveillance in the Vicinity of the Boardman Coal-Fired Power Plant, Oregon," 1982.

Doherty, David D. "Mapping the Potential Acidic Deposition in Southwestern California Using Ambient Air Concentrations of Acid Precursors," 1982.

James, Mark J. "A Methodology for the Evaluation of Performance Zoning," 1982.

Klein, Jonathan W. "Interpretive Evolution of the Wilderness Act: The Implications of Change," 1982.

Lieuwen, Andrew. "Estimating Streamflow Characteristics for Micro-Hydro Sites in Northwestern Oregon," 1982.

Liverman, Marc C. "Multivariate Analysis of a Tidal Marsh Ecosystem on Netarts Spit, Tillamook County, Oregon," 1982.

Malstaff, Greg. "Microcomputer Simulation for Subsurface Water Potential on Hillslope," 1982.

McClenahan, Michael R. "Eolian Landforms and Wind Power Prospecting in the Central Columbia River Basin," 1982.

Sjogren, Gary. "Site and Community Needs of Industrial Firms Considering Location in Corvallis, Oregon," 1982.

Turner, Michael F. "Analyzing the Impact of Flood Plain Regulations Upon Residential Land Values: The North Albany Case Study," 1982.

University of Oregon

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1920's GRADUATE PROGRAM FOUNDED: 1923

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81–6/30/82: 6 M.A., 4 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 17 M.A. 10 Ph.D.
NOT IN RESIDENCE: 3 M.A. 8 Ph.D.

HEAD: William G. Loy

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Administrative Assistant, Department of Geography, University of Oregon, Eugene, Oregon 97403
Telephone (503) 686–4555

PROGRAMS AND RESEARCH FACILITIES: Staff interests in advanced graduate training include physical, cultural, historical, and urban geography, Latin America, Europe, and North America. Strong emphasis is placed on field research.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Oregon is on the quarter system. The Department selects for admission on the basis of letters of recommendation, grade point average, and scores on the Graduate Record Examination. Graduate teaching fellowships are available ($4,420 to $5,276 for 1/3 time).

STAFF:

Patrick J. Bartlein, Ph.D., Wisconsin-Madison, 1978, Assistant Professor—climatology, quantitative methods, water resources

Samuel N. Dicken, Ph.D., UC, Berkeley, 1931, Professor Emeritus—North America, Oregon, coastal geomorphology

Carl L. Johannessen, Ph.D., UC, Berkeley, 1959, Professor—plant geography, Latin America

William G. Loy, Ph.D., Minnesota, 1967, Professor—cartography, photo interpretation, place-name studies

Patricia F. McDowell, Ph.D., Wisconsin-Madison, 1978, Assistant Professor—geomorphology, Quaternary environments, soils, environmental management

Clyde P. Patton, Ph.D., UC, Berkeley, 1953, Professor—cultural, climatology, Europe

Edward T. Price, Ph.D., UC, Berkeley, 1950, Professor Emeritus—cultural, historical, North America

Gary H. Searl, M.S., Oregon, 1966, Adjunct Assistant Professor—geographic education, Oregon

Everett G. Smith, Jr., Ph.D., Minnesota, 1962, Professor—urban, social, North America

Alvin W. Urquhart, Ph.D., UC, Berkeley, 1962, Professor—cultural, Africa

Ronald Wixman, Ph.D., Chicago, 1978, Assistant Professor—U.S.S.R., East Europe, cultural

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Coffey, Brian. "The Pioneer House in Southern Ontario, Canada: Construction Material Use and Resultant Forms to 1850," 1982.

Feiereisen, Joseph J. "Geomorphology, Alluvial Stratigraphy, and Sediments: Lower Siuslaw and Alsea River Valleys, Oregon," 1981.

Horowitz, Howard. "Conifer Shrub Growth Interactions on Proposed Brush Control Sites in the Western Oregon Cascades," 1981.

Pritchard, Sandra. "Landscape Changes in Summit County, Colorado: 1859 to the Present, A Historical Geography," 1982.

Master's:

Adams, Rodger. "Landscape of Commercial Fishing in Coos Bay, Oregon," 1982.

Beers, Christian. "Basque Settlement in Jordan Valley, Oregon," 1982.

Grassetti, Richard A. "Endangered Landscapes of the Stanislaus River: A Non-traditional Approach to the Assessment of Wild and Scenic Rivers," 1982.
Groesch, Michael A. "Landforms of the McKenzie River Basin," 1982.
Mehnert, Paul. "The Urban Development of West Eugene, Oregon," 1982.
Wilde, Steve. "Morphological Evolution of the Sutton Creek Dune Field," 1982.

The Pennsylvania State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1945 GRADUATE PROGRAM FOUNDED: 1946

DEGREES OFFERED: M.S., Ph.D.

GRANTED 7/1/81–6/30/82: 6 M.S., 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 20 Masters 14 Ph.D.
NOT IN RESIDENCE: 15 Masters 12 Ph.D.

HEAD: C. Gregory Knight

FOR CATALOG AND FURTHER INFORMATION WRITE TO: C. Gregory Knight, Head, Department of Geography, 302 Walker Building, University Park, Pennsylvania 16802
Telephone (814) 865-3433

PROGRAMS AND RESEARCH FACILITIES: Individual graduate programs are built around fifteen research interests:

American Landscape: Visual properties of the American environment; origin and character of differences in landscape from place to place; symbolism of natural and artificial landscapes in American culture, past, present, and future.

Behavioral Geography: Environmental cognition; cognitive mapping; place preferences of inter-regional migrants; residential site selection and intra-urban migration; micro-spatial behavior of individuals and groups.

Communications Systems: Geographical organization and social impacts of postal, telephonic, and cable television networks; national and international information flows; effects of communications media on culture.

Cultural Geography of Anglo-America: Spatial patterns in American life, material and non-material, past and present; problems in general cultural theory with special reference to northeastern United States.

Cultural Geography of Southeast Asia: Population problems; mobility and migration; economic development; transportation; urbanization.

Geographic Analysis: Cartography; computer modeling; computer graphics and data display; structure and properties of geographic data systems; use of normative models in research design; statistical methods and applications; simulation; structural analysis, qualitative mathematics in the human sciences.

Geography of the Developing World: Problems of regional development in Africa, Latin America, Southeast Asia, southern Europe; economic geography of South Asia; radical theories of economic development; agricultural systems and development in the Third World.

Geographic Theory: Structure of geographic inquiry; nature of the science of geography; geographic thought within the history of science; systems theory and location theory; phenomenological bases of geographical inquiry.

Human Geography of the U.S.S.R.: Problems of demographic and economic development in the Soviet Union (in cooperation with the University's Soviet Language and Area Center).

Human Use of Environment: Structure and dynamics of man-environment systems; cultural ecology; resource assessment and allocation; land use management; energy systems analysis.

Industrial Location and Regional Economic Development: Industrial location theory; spatial analysis of manufacturing systems, problems of industrial development; factors of localization of manufacturing; problems of regional income inequalities within the developed nations; planning for optimal socio-economic growth.

Macro-spatial Analysis in Regional and Urban Development: Public policy and location of public and private facilities; regional economic analysis; metropolitan spatial structure; transportation and modernization processes; space-distorting properties of communications systems; spatial diffusion processes; regional and urban planning.

Population Problems: Evolution of present spatial patterns of population growth and characteristics; population problems in developing societies; population distribution and redistribution, emphasis on United States.

The Department has no specific course requirements. Programs of study are arranged with advisors and committees to suit individual needs and professional aims. A thesis or two research papers are required for the M.S. degree.

The Department occupies excellent facilities on a beautiful campus. Available facilities include several computer systems: IBM 3081 and 4341, E&S Picture System, APPLEs, etc.

The Department participates in the graduate programs in Environmental Pollution Control, Operations Research, and in the Interdisciplinary Program in the Humanities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University follows the term system. Each term (fall, winter spring, and summer) is ten weeks. Penn State will shift to a semester calendar in 1983-1984. Applicants must have maintained during their junior and senior years overall grade point averages equivalent to 3.0 (A = 4.0) for admission. GRE scores must be submitted with application materials. The Geography Department offers on a competitive basis a number of teaching and research assistantships each year. Half-time appointments carry a stipend of $4350 for three terms plus a grant-in-aid to cover all tuition fees for the entire year. Other awards include: grants-in-aid; University Fellowships; Faculty Aide positons.

STAFF:

Ronald F. Abler, Ph.D., Minnesota, 1968, Professor—history of geography, geography of communications systems, urban, cartography

Roger M. Downs, Ph.D., Bristol, 1970, Professor—behavioral, environmental cognition

Rodney A. Erickson, Ph.D., Washington, 1973, Associate Professor; Associate Professor of Business Administration; Director of the Pennsylvania Economic Analysis Program—economic, urban, regional economic development

Ronald Eyton, Ph.D., Illinois, 1974, Associate Professor—remote sensing, air photo interpretation

Peter R. Gould, Ph.D., Northwestern, 1960, Professor—methodology, human

C. Gregory Knight, Ph.D., Minnesota, 1970, Professor—environmental systems, cultural ecology, Africa

Peirce F. Lewis, Ph.D., Michigan, 1958, Professor—American landscapes

E. Willard Miller, Ph.D., Ohio State, 1942, Professor Emeritus—minerals, geography of manufacturing

Allan Rodgers, Ph.D., Wisconsin, 1950, Professor—industrial location, economic geography of the U.S.S.R. and Italy, regional economic development

Paul D. Simkins, Ph.D., Wisconsin, 1961, Professor—population, migration, Latin America

Frederick L. Wernstedt, Ph.D., UCLA, 1953, Professor—Southeast Asia, tropical, climatology

Anthony V. Williams, Ph.D., Michigan State, 1968, Associate Professor and Chairman, University Operations Research Program—human, computer applications, quantitative techniques, geographic information systems

Lakshman Yapa, Ph.D. Syracuse, 1969, Associate Professor—economic development, third world, political economy, spatial diffusion, quantitative methods, South Asia

Wilbur Zelinsky, Ph.D., UC, Berkeley, 1953, Professor—cultural, historical, population, North America

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Abu Sabha, Kayed O. "The Spatial Arrangement and Temporal Changes in Population Age Structures, 1960-1970, in Three Suburban Areas, Philadelphia, St. Louis, and Milwaukee," 1981. * Mf., Univ. Microfilms.

Christensen, Kathleen E. "Geography as a Human Science: A Philosophical Critique," 1981. * Mf., Univ. Microfilms.

Suwan, Manat. "Resettlement of Population Following Dam Construction: The Case of Srinagarind Dam, Thailand," 1981. * Mf., Univ. Microfilms.

Master's:

Blair, Edward. "The Microcomputer as an Instructional Tool in Geography," 1982.

Hargan, James. "Evaluating a Neighborhood-Based Project: A Case Study in Traffic Law Enforcement," and "The Sequence of Development in a Tampa Suburb, 1900-1978," 1982.

Jenkins, David B. "The Historical Geography of Afghanistan as a Buffer State," 1981.

Jenkins, Ronald. "Arms Flow Patterns to the Third World: A Geographic Interpretation," 1982.

Levensohn, Vivian. "Appalachia and the American Mind," 1982.

Slentz, E. William. "Historic Preservation in Pennsylvania as Measured by the National Registry of Historic Places," 1982.

University of Pennsylvania

REGIONAL SCIENCE DEPARTMENT

DATE FOUNDED: 1958 **PH.D. PROGRAM FOUNDED: 1958 (GRADUATE FACULTY OF ARTS AND SCIENCES)**

DEGREES OFFERED: A.M., Ph.D.

GRANTED 7/1/81–6/30/82: 11 M.A., 10 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 45
NOT IN RESIDENCE: 26

CHAIRMAN: Ronald E. Miller
GRADUATE GROUP CHAIRMAN: Daniel E. Vining, Jr.

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Admission Chairman, Regional Science Department, University of Pennsylvania, 3718 Locust Walk, 130 McNeil/CR, Philadelphia, Pennsylvania 19104
Telephone: (215) 243-8412

PROGRAMS AND RESEARCH FACILITIES: Regional Science is an interdisciplinary social science department concerned with the locational behavior of individuals and groups, institutions and governments. In addition to studying the spatial distribution and redistribution of specific activities and actors (e.g., firms, households), the field is also concerned with structure and development of national and regional social and economic systems. In practice, the orientation of the field has also led to very close relationships among theoretical research, planning, and policy in both the public and private sectors.

Study in the Department of Regional Science has historically led to a variety of job opportunities both in the United States and abroad. These have included teaching and research at universities (in departments of economics, geography, environmental science, city and regional planning, and public policy); research positions in public and private agencies; and specialists working with planning commissions, resource and area development agencies, and in firms which are engaged in marketing, land development, transportation, and industrial location.

The Degree of Master of Arts (A.M.)—The master's degree provides the student with basic theory and analytical tools for research. The degree prepares graduates for entry into middle level professional positions.

Programs are available leading to joint master's degrees in regional science and city planning (A.M./M.C.P.), in regional science and public policy

(A.M./M.A.P.P.), and in regional science and regional planning (A.M./M.R.P.). Joint programs generally require from two to three years of study.

The Degree of Doctor of Philosophy (Ph.D.)—The Ph.D. program provides highly individualized training in theory, methods, and research in regional science. The degree prepares candidates for university research and teaching, as well as for advanced work in a number of fields.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:

Admissions—Applications are welcome from students, professionals, and scholars in a wide range of fields. Students are required to take the Aptitude Test of the Graduate Record Examination (GRE) and to have proficiency in English. Applicants whose active language is English ordinarily submit results of the Test of English as a Foreign Language (TOEFL). Information on the GRE and TOEFL is available from the Educational Testing Service, Princeton, New Jersey, and Berkeley, California, or from the United States Information Service located in offices of a United States Council General abroad.

Some applicants may need additional mathematical preparation for entrance into courses. Many courses, for example, require some knowledge of calculus. Arrangements can be made to provide such preparation when the candidate is otherwise well prepared for graduate work.

Financial Aid—The University offers a limited number of fellowships to Ph.D. students. Applications for financial aid for the 1983-84 academic year must be filed by March 1, 1983.

The number of grants offered through the University for first-year students is necessarily limited and the competition is keen. Prospective students who need assistance should therefore apply to other sources as well (e.g., foundations, government).

FACULTY:

W. Bruce Allen, Ph.D., Northwestern, 1969, Professor of Regional Science and Transportation—microeconomic analysis of location and transportation

James Bennett, Ph.D., MIT, 1978, Assistant Professor of Regional Science and Conflict Analysis and Peace Research—modeling structural change, regional political and economic development

Peter D. Blair, Ph.D., Pennsylvania, 1976, Assistant Professor of Regional Science—energy system modeling and simulation, energy policy analysis

Robert C. Douglas, Ph.D., Pennsylvania, 1978, Adjunct Assistant Professor—American economic history, regional and urban development, spatial market systems analysis

Thomas Fogarty, Ph.D., Pennsylvania, 1978, Assistant Professor of Regional Science and Conflict Analysis and Peace Research—regional political economy, social choice, location and policy games

Masahisa Fujita, Ph.D., Pennsylvania, 1972, Associate Professor of Regional Science—location theory, regional and urban growth and planning

Stephen Gale, Ph.D., Michigan, 1969, Associate Professor of Regional Science, Conflict Analysis and Peace Research, City and Regional Planning, and Public

Policy Analysis—urban information systems, locational decision-making, philosophy of social sciences

Aaron Gellman, Ph.D., MIT, 1957, Adjunct Professor of Regional Science—transport management and the process of innovation

Ralph Ginsberg, Ph.D., Columbia, 1966, Professor of Regional Science—spatial demography, stochastic models, statistical analysis, and organization theory

Norman J. Glickman, Ph.D., Pennsylvania, 1969, Professor of Regional Science—economic analysis of spatial problems, urban economics, impact analysis

Walter Isard, Ph.D., Harvard, 1943, Adjunct Professor of Regional Science—methods of regional analysis, location theory, conflict management, policy space analysis, multiregional models

Phyllis Kaniss, Ph.D., Pennsylvania, 1978, Lecturer on Regional Science—evolutionary theory, hierarchy theory, analysis of informational processes in social and biological systems

Janice F. Madden, Ph.D., Duke, 1972, Associate Professor of Regional Science and Undergraduate Chairman—spatial labor economics and demography

Ronald E. Miller, Ph.D., Princeton, 1961, Professor of Regional Science and Chairman—input-output analysis, applications of calculus of variations and maximum principle techniques

Elizabeth M. Petras, Ph.D., SUNY, Binghamton, 1981, Assistant Professor of Regional Science—political economy, urban and rural sociology, community development, migration, immigration

Thomas A. Reiner, Ph.D., Pennsylvania, 1963, Professor of Regional Science and City and Regional Planning—regional planning and urbanization in developing nations, normative modeling, planning theory

Tony E. Smith, Ph.D., Pennsylvania, 1969, Professor of Regional Science—theoretical foundations of spatial interaction behavior

Daniel R. Vining, Ph.D., Pittsburgh, 1974, Associate Professor of Regional Science and Chairman of the Graduate Group—applied statistics, ecological models of urban change, migration

Philip A. Viton, Ph.D., UC, Berkeley, 1977, Assistant Professor of Regional Science and Transportation—economics of urban transportation, regulation and environmental issues

Alan Wilson, M.A., Cambridge, 1964, Adjunct Professor of Regional Science—spatial modeling

James Zucchetto, Ph.D., Florida, 1975, Assistant Professor of Regional Science—ecological modeling and theory, regional energy analysis, energy-economic relationships, environmental impact and evaluation

TITLES OF DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Akita, Takahiro. "Spatial Processes of Urban Redevelopment," 1981.

Amin, Muhammad A.B. "Interregional and Interurban Disparities: Indonesia," 1981.

Ando, Asao. "Development of a Unified Theory of Urban Land Use," 1981.

DaSilva, Jose M.M. "Demand- and Supply-Oriented Input-Output Models: A Linkage Analysis for Portugal," 1981.

Hsu, Song-ken. "Contributions to Spatial Price Theory," 1981.

Lonergan, Stephen C. "A Simulation/Optimization Model for Resolving Economic/Ecological Conflicts: Philosophy, Theory and Application to the Chesapeake Bay," 1981.

Plane, David A. "A 'Minimum Information' Approach to the Spatial Modelling of Human Migration: With Applications to U.S. Interstate Flows," 1981.

Sjafrizal. "Product Life Cycle Impacts on Manufacturing Location," 1981.

Webb, G. Kent. "An Economic Planning Model for Cable Television: A Philadelphia Case Study," 1982.

Yeh, Shi-Tao. "Three Essays on Different Approaches to Related Residential Environment Problems," 1981.

Portland State University

GEOGRAPHY DEPARTMENT

DATE FOUNDED: 1959 **GRADUATE PROGRAM FOUNDED: 1969**

DEGREES OFFERED: M.A., M.S.

GRANTED 7/1/81–6/30/82: 4

GRADUATE STUDENTS IN RESIDENCE: 17
NOT IN RESIDENCE: 6

HEAD: D. Richard Lycan

FOR FURTHER INFORMATION WRITE TO: Geography Department, Portland State University, P.O. Box 751, Portland, Oregon 97207
Telephone (503) 229-3916

PROGRAMS AND RESEARCH FACILITIES: The Geography Department offers the degrees of Master of Arts and Master of Science. In addition to general predoctoral study, other programs are offered for students who intend to enter the fields of urban and regional planning and environmental analysis and management.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: For admission to graduate study a student normally should have completed the minimum preparation for an undergraduate major in geography with a 3.0 average in all upper division work, in addition to meeting University admission requirements. Students with majors in other fields are encouraged, if they can demonstrate ability, to pursue graduate work in geography. Applicants are requested to submit the score for the aptitude section of the Graduate Record Examination and the names and addresses of three faculty members of colleges previously attended or persons who can be contacted by the Geography Department for recommendations. Applicants for whom English is a second language are required to present a minimum TOEFL score of 550.

The student will plan a program of study with an adviser during the first term of residence which must include a minimum of 30 graduate-credit term hours in geography, of which at least 15 hours must be in 500-level courses, including the following three seminars: Proseminar in Geography, Geographic Thought and Literature, and Research Design. All graduate students are required to attend the department's non-credit colloquia.

After a student has completed at least 12 credits in residence in geography with an average grade of B or higher and has satisfied any deficiencies noted at the the time of admission, the student is eligible to take the required comprehensive examination, which is provided and graded by the student's committee. If failed, the student may be allowed to retake portions of the examination or may be advised to take additional course work. Students seeking the M.A. degree must demonstrate their competence in the use of a foreign language for geographic research; those preparing for an M.S. degree must show proficiency in advanced quantitative methods in geography or an equivalent research technique. Upon successful completion of the comprehensive examination and successful demonstration of the required competence, the student is advanced to candidacy.

Students in the M.A. program must complete a thesis. Those in the M.S. program may choose between thesis and non-thesis options. The thesis option is appropriate for students intending to pursue Ph.D. studies, whereas the non-thesis option is designed for students who are preparing for careers in such areas as government service or private industry. Candidates who elect to write a thesis take a minimum of 45 credits including 6 credits in Geog. 503 Thesis. The thesis option requires the presentation of the student's independent research into a topic approved by the student's graduate committee. It normally involves field work and is an original contribution to knowledge in the field of geography.

Candidates electing the non-thesis option take a minimum of 54 credits including the presentation of a research paper. The M.S. research paper is normally the outgrowth of a geography seminar, in which case up to 3 credits may be taken in Geog. 501 Research. The research paper is submitted to the student's graduate committee. A final oral examination by the student's committee includes defense of the thesis or research paper.

STAFF:

James G. Ashbaugh, Ph.D., UCLA—urban, Pacific Northwest, water resources
Clarke H. Brooke, Jr., Ph.D., Nebraska—Middle East, endangered species, feral livestock
Dale E. Courtney, Ph.D., Washington—historical, Latin America
John O. Dart, Ph.D., Washington—geomorphology, conservation, Oregon
Alexander R. Gassaway, Ph.D., Clark—economic, Europe
Daniel M. Johnson, Ph.D., Arizona State—climatology, hydrology, resource management
Fritz L. Kramer, Ph.D., UC, Berkeley—cartography, historical, cultural (on leave 1982-83)
D. R. Lycan, Ph.D., Washington—demography, cartography, computer cartography
Thomas M. Poulsen, Ph.D., Wisconsin—U.S.S.R., Eastern Europe, world affairs
Larry W. Price, Ph.D., Illinois—geomorphology, periglacial environments, soils, mountains
Willert Rhynsburger, Ph.D., Washington—urban systems, East and Southeast Asia

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Voeks, Robert A. "The Biogeography of Oregon White Oak (*Quercus garryana*) in Central Oregon," 1981.

Rutgers University

GRADUATE PROGRAM IN GEOGRAPHY

DATE FOUNDED: 1956

DEGREES OFFERED: M.A., M.S., M.Phil., Ph.D.

GRANTED 7/1/81-6/30/82: 5 Masters, 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 28 Masters 13 Ph.D.
NOT IN RESIDENCE: 11 Masters 5 Ph.D.

DIRECTOR: James K. Mitchell

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Director, Graduate Program in Geography, Department of Geography, School of Urban and Regional Policy, Rutgers University, New Brunswick, New Jersey 08903
Telephone (201) 932-4107

PROGRAMS AND RESEARCH FACILITIES: The Rutgers program is characterized by varied course offerings, rich faculty resources, strong interdisciplinary ties, access to unrivalled research opportunities and facilities, and firm links with policy management agencies in state and federal governments. It is also the largest and most comprehensive geography graduate program in the New York and Philadelphia metropolitan regions.

Faculty currently work in such areas as urban water resource management, hazards research, environmental planning and decision making, coastal geomorphology and coastal zone management, regional development, human ecology, perception of urban environments, processes of urbanization, medical, behavioral, historical, cultural, and social geography. Faculty and students contribute to the *Rutgers Geography Discussion Papers* series. Several titles are published each year.

Students can pursue courses of study based on a flexible combination of required and elective courses. The Department of Geography is a unit of the newly established School of Urban and Regional Policy. Close ties are maintained with the Center for Coastal and Environmental Studies, Center for Urban Policy Research, Agricultural Experiment Station, and a variety of interdisciplinary departments and programs throughout the University.

Rutgers is convenient to several of the country's largest research libraries and to a vast range of research and funding institutions and public agencies. Batch processing and timesharing are provided through an IBM 360/67 computer.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Teaching assistantships with full remission of tuition are available. The stipend is approximately $5500. Similar compensation is provided by several research assistantships. University fellowships and tuition scholarships are also available.

STAFF AND ASSOCIATES:

Teuvo M. Airola, Ph.D., Duke, 1976, Associate Professor—environmental resources

Baruch Boxer, Ph.D., Chicago, 1961, Professor—international environmental issues, China

John E. Brush, Ph.D., Wisconsin, 1952, Professor—population and settlement, South Asia

George W. Carey, Ed.D., Columbia, 1964, Professor—urban, social ecology

Thomas A. Clark, Ph.D., Iowa, 1975, Assistant Professor—urban planning, regional development

Susan Caris Cutter, Ph.D., Chicago, 1976, Assistant Professor—environmental management, community attitudes toward pollution

Michael R. Greenberg, Ph.D., Columbia, 1969, Professor—regional economic development, quantitative methods, environmental management

William Hamilton, Ph.D., Oregon State, 1980, Assistant Professor—cartography, computer mapping, remote sensing

Briavel Holcomb, Ph.D., Colorado, 1972, Associate Professor—urban, social, perception

Robert M. Hordon, Ph.D., Columbia, 1970, Associate Professor—fluvial geomorphology and hydrology

Robert W. Lake, Ph.D., Chicago, 1981, Associate Research Professor—urban and social

Glenn R. Miller, Ph.D. candidate, Cincinnati, Adjunct Instructor—urban, economic, cartography

James K.Mitchell, Ph.D., Chicago, 1973, Professor—resource management, coastal and marine geography, human response to hazard

George H. Nieswand, Ph.D., Rutgers, 1970, Professor—environmental management and planning, systems analysis

Karl F. Nordstrom, Ph.D., Rutgers, 1975, Associate Professor—beach process analysis, coastal land use and shoreline development

Norbert P. Psuty, Ph.D., Louisiana State, 1966, Professor—physical, coastal landforms, remote sensing

Joanna Regulska, Ph.D. candidate, Colorado, Adjunct Instructor—urban, economic, statistical methods

William H. Renwick, Ph.D., Clark, 1979, Assistant Professor—fluvial geomorphology, environmental geomorphology, applied climatology

Robert W. Roundy, Ph.D., UCLA, 1976, Assistant Professor—medical geography, environment and development in the Third World, human ecology

Andrew P. Vayda, Ph.D., Columbia, 1956, Professor—human ecology, economic development and environmental problems

Peter O. Wacker, Ph.D., Louisiana State, 1966, Professor—historical, cultural, Anglo-America

Grant F. Walton, Ph.D., Rutgers, 1973, Professor—pedology, natural resource planning

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Sabrin, Murray. "The Spatial Incidence of Inflation in the United States 1967-1971: An Economic-Geographic Perspective," 1981.

Master's:

Kucma, Gail Ann. "Barriers to Effective Communication of Coastal Erosion Information," 1982.

Posten, Stephen Edward. "Estimation of Mean Ground Water Runoff and Safe Yield Using Hydrograph Analysis in Selected New Jersey Hard Rock Aquifers," 1982.

San Diego State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1914 GRADUATE PROGRAM FOUNDED: 1956

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 10

GRADUATE STUDENTS IN RESIDENCE: 41
NOT IN RESIDENCE: 7

CHAIRMAN: Ernst C. Griffin

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Bob R. O'Brien, Graduate Advisor, Department of Geography, San Diego State University, San Diego, California 92182
Telephone (714) 265-5437

PROGRAMS AND RESEARCH FACILITIES: A flexible curriculum complemented by careful advising permits the department to design a program tailored to the professional goals of each M.A. candidate. Students also benefit from a long tradition of close faculty-student contact.

A wide variety of teaching specialties is represented in the department but the main strengths are in the following subdivisions of the field: (a) conservation and environmental studies; (b) urban and transportation geography; (c) cartography and remote sensing; (d) geomorphology; (e) Latin America. Graduate students are urged to study in one or more of the above concentrations. Applied programs are availabl leading to positions in categories (a), (b) and (c) above.

The department has excellent physical facilities. In addition to well-equipped classrooms, the department has a cartographic laboratory, field and photogrammetric equipment, graduate assistant offices, a class "A" weather station, and a reading room. An excellent map collection of approximately 100,000 sheets is located in the main library. Geography cooperates in a Social Science Research Center, with 20 interactive terminals to on and off campus computers including a VAX, a PDPII, and a CDC 3300; the Center also has an RJE for batch input to an IBM 360/50 and a CYBER 750/175.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Two Master of Arts degree plans are available: one which requires a thesis, and a second which requires two research papers. Limited assistantships are available for qualified students on a competitive basis. Semester System.

STAFF:

James D. Blick, Ph.D., UCLA, 1956, Associate Professor—California, Europe
Albert A. Colombo, M.A , San Diego State, 1963, Assistant Professor—political, cultural
Donald I. Eidemiller, Ph.D., Indiana, 1956, Professor—climatology, meteorology
Willam A. Finch, Jr., Ph.D., Illinois, 1964, Professor—field methods, physical, remote sensing
Larry R. Ford, Ph.D., Oregon, 1970, Professor—urban, urban design, cultural
Barbara E. Fredrich, Ph.D., UCLA, 1975, Associate Professor—Latin America, vegetation, cultural
Ned H. Greenwood, Ph.D., Ohio State, 1963, Professor—soils, environment, human ecology
Ernst C. Griffin, Ph.D., Michigan State, 1972, Professor—Latin America, cultural
Warren A. Johnson, Ph.D., Michigan, 1969, Professor—natural resources, cultural
Elmer A. Keen, Ph.D., Washington, 1965, Professor—economic, marine resources, East Asia, cultural
E. J. Conrad Kiewiet de Jonge, Ph.D., Clark, 1951, Professor—climatic and structural geomorphology, air photo interpretation, history of geography
David S. McArthur, Ph.D., Louisiana State, 1969, Associate Professor—physical, coastal and fluvial geomorphology, quantitative methods
Bob R. O'Brien, Ph.D., Washington, 1965, Professor—conservation, outdoor recreation
Philip R. Pryde, Ph.D., Washington, 1969, Professor—environmental quality, water resources, Soviet Union
Imre E. Quastler, Ph.D., Kansas, 1971, Professor—transportation, urban
Frederick P. Stutz, Ph.D., Michigan State, 1970, Professor—transportation analysis, urban systems, quantitative methods, computer applications
Richard D. Wright, Ph.D., Kansas, 1967, Professor—cartography, map analysis
Charles C. Yahr, Ph.D. Illinois, 1956, Professor—cultural, South and Southeast Asia, United States

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Hoffmann, Robert Erhardt. "Premature Housing and Community Decline in Suburbia," 1982.* Mf., Univ. Microfilms.

Houghton, Brent Alan. "Detecting Urbanization of Peri-Urban Areas with Landsat," 1981.* Mf., Univ. Microfilms.

Hussey, Kevin John. "An Automated Procedure for Assessing Population Exposure to Air Pollution in Southern California Utilizing Image Processing Technology," 1981.* Mf., Univ. Microfilms.

Iacometti, Susan Elizabeth. "An Evaluation of Low-Resolution Interactive Graphics as an Aid in Preparing Proportional Point Symbol Maps," 1981.* Mf., Univ. Microfilms.

Lapota, David. "A Biogeographical Evaluation in the Conservation of Several Species of Encemic Abalone," 1982.* Mf., Univ. Microfilms.

Latham, Vern Oakes. "500 Millibar Circulation Patterns Related to Santa Ana Weather in San Diego County," 1981. Mf., Univ. Microfilms.

Powell, Harry Wayne. "Mission Beach: The Creation of Place," 1981.* Mf., Univ. Microfilms.

Rugge, Steven Meredith. "Detection of Urban Land Cover Change in San Diego's Mira Mesa/Scripps Ranch Area with Landsat Digital Data," 1982.* Mf., Univ. Microfilms.

Spear, Steven Gregory. "The Physical Geographic Boundary Between the Salton Trough and Peninsular Ranges Natural Provinces in San Diego and Imperial Counties, California," 1981.* Mf., Univ. Microfilms.

Tracey, Michael Stephen. "Airline Deregulation and Its Effect on Service to Small Communities in Northern California: A Guideline for the Potential of Economic, Unsubsidized Service," 1982.* Mf., Univ. Microfilms.

San Francisco State University

DEPARTMENT OF GEOGRAPHY AND HUMAN ENVIRONMENTAL STUDIES

DATE FOUNDED: 1937 GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.A.

GRANTED 7/1/81–6/30/82: 4

GRADUATE STUDENTS IN RESIDENCE: 23
NOT IN RESIDENCE: 33

CHAIRPERSON: Jean Vance

FOR FURTHER INFORMATION WRITE TO: Steven R. Pease, Graduate Advisor, Department of Geography and Environmental Studies, San Francisco State University, 1600 Holloway Avenue, San Francisco, California 94132
Telephone (415) 469–2049

PROGRAMS AND RESEARCH FACILITIES: The M.A. program is directed toward a broad base of knowledge in geography. The department has an interest in meeting the needs of planners, cartographers, and professional geographers as well as those intending doctoral studies. Opportunities to do concentrated work do exist, particularly in several sub-fields: regional planning, environmental studies, geographic techniques, physical, regional, cultural-historic, and urban-economic. Research facilities include a photocartographic laboratory, a map library, access to the college computer center and environmental field stations.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. Completion of a minimum 30 units of work in geography including four graduate seminars and a Master's thesis or examination option; no foreign language requirement. Individualized programs reflecting the interests and career goals of each student are developed insofar as faculty with those interests are available. A minimum of 3 semesters needed for completion of course work; limited summer program. Admission requirements—15 undergraduate semester hours in geography with B average for last two academic years (deficiencies in undergraduate program to be made up without counting toward required graduate hours); three letters of recommendation. Only a few assistantships are available for advanced students already in residence.

STAFF:

Lawrence E. Band, Ph.D., UCLA, 1981, Lecturer—landform geography, water resources

Roger J. Crawford, Ph.D., Washington, 1969, Professor—regional planning, environmental impact and design, urban transportation

Burton L. Gordon, Ph.D., UC, Berkeley, 1954, Professor—field study, biogeography, Europe

Richard F. Hough, Ph.D., Wisconsin, 1963, Professor—cultural, Japan, field study

Max C. Kirkeberg, M.S., Wisconsin, 1961, Associate Professor—geographic education, cultural, San Francisco, Africa

Hans-J. Meihoefer, Ph.D., Washington, 1968, Professor—geographic methodology, environmental management, agriculture

Steven R. Pease, Ph.D., Wisconsin, 1977, Associate Professor—climatology-meteorology, physical, environmental problems, remote sensing

Robert D. Picker, Ph.D., Washington, 1962, Professor—economic, environmental management, U.S.S.R.

Georg Treichel, M.A., UC, Berkeley, 1969, Professor—biogeography, environmental studies, human ecology, transportation

Jean Vance, Ph.D., Clark, 1958, Professor—urban, cultural

John E. Westfall, Ph.D., George Washington, 1968, Professor—historical, quantitative, computer applications, population

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Andreotti, Ralph Dante. "Reduction of Forested Areas of the Los Esclavos Watershed, Santa Rosa Department, Guatemala," 1981.

Dorland, Deborah. "A Post-Glacial Pollen Record from Myers Grade Marsh, El Dorado County, California," 1981.

Francis, Marc. "Transportation Problems in Exporting United States Western Steam Coal to the Pacific Rim," 1981.

San José State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1965 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A.

GRANTED 7/1/81–6/30/82: 5

GRADUATE STUDENTS IN RESIDENCE: 22
NOT IN RESIDENCE: 9

CHAIRMAN: Michael P. McIntyre

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Lester Rowntree, Graduate Coordinator, Department of Geography, San José State University, Washington Square, San José, California 95192
Telephone: (408) 277-3463, 3464

PROGRAM AND RESEARCH FACILITIES: The program comprises advanced studies in a required core and specialization in a selected field. The region of interest or the topic of research specialization, consonant with faculty interests and university resources, is broadly framed to provide flexibility in developing the candidate's study focus. Several areas of concentration within geography may be selected. However, the candidates choosing an emphasis in land-use analysis and mapping based on both conventional and remotely sensed imagery find their work facilitated by the department's well-equipped laboratory which features an electronic density slicer, an electronic planimeter/digitizer, a zoom transfer scope, a zoom stereoscope, a copy camera, and numerous cartographic devices. A few graduate students regularly work on funded land-use projects.

ACADEMIC PLAN AND ADMISSION REQUIREMENTS: The program, containing a thesis and a non-thesis option, consists of 30 semester units, the equivalent of one full academic year. Minimal university admission requirement is a 2.5 grade average. Generally there are no financial aids. Semester system.

STAFF:

Richard A. Ellefsen, Ph.D., UC, Berkeley, 1968, Professor (part-time)—urban, land use, remote sensing, California, India

Allan R. Fishman, Ph.D., Illinois, 1971, Professor—economic, conservation, Anglo-America, Europe

Michael P. McIntyre, Ph.D., Ohio State, 1951, Professor—physical, economic, Pacific, Far East, national parks

Duilio Peruzzi, Ph.D., Michigan, 1963, Professor—cartography, remote sensing, land use, Europe

Lester B. Rowntree, Ph.D., Oregon, 1971, Professor—cultural, urban, California, research methods

David E. Schwarz, Ph.D., Kansas, 1976, Associate Professor—remote sensing, cartography, human

Bill H. Takizawa, Ph.D., Illinois, 1971, Professor—economic, natural resources, cartography, East Asia

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Bass, Glennon. "Aquaculture at Newberry Springs," 1981.

Johnston, Barbara Rose. "The Problem of Water in St. Thomas, U.S. Virgin Islands: A Cultural and Ecological Study," 1981.

Lein, James Kurt. "Topographic Influences of Land Surface Characteristics: An Assessment of Conditional Stress Zones in the Hayes Valley Area, California," 1981.

Thomas, Jessie, Jr. "Metropolitan Marketshed: Television Viewing Area," 1982.

Shippensburg State College

DEPARTMENT OF GEOGRAPHY-EARTH SCIENCE

DATE FOUNDED: 1934 GRADUATE PROGRAM FOUNDED: 1976

DEGREES OFFERED: M.S. in Geoenvironmental Studies

GRANTED 1/1/81-5/31/82: 6

GRADUATE STUDENTS IN RESIDENCE: 10
NOT IN RESIDENCE: 15

CHAIRMAN: John E. Benhart

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairperson, Geography-Earth Science Department, Shippensburg State College, Shippensburg, Pennsylvania 17257
Telephone (717) 532-1685

PROGRAMS AND RESEARCH FACILITIES: The Geoenvironmental Studies Program is designed to prepare planners, researchers, and educators with a broad understanding of the environment and with the technical and managerial skills of problem-solving. Instead of the more narrow, traditional single-science approach, this academic degree draws upon the interactions of the disciplines of geography and the earth sciences to prepare the geoenvironmental specialist. Namely, the geographic expertise is in the form of environmental relations, land use, locational analysis, resources, and regional knowledge; the earth science expertise is in the form of the applied aspects of geology, meteorology, hydrology, and soil science.

This specialization prepares graduates for positions at the operational and policy-making levels in federal, state, and local governmental agencies, industry, and consulting firms, as well as for higher levels of education and doctoral work in this field.

Graduate students majoring in Geoenvironmental Studies have the opportunity to experience an internship as part of their graduate course work. Many employers consider internships important for personnel recruitment, and many internships develop into full-time jobs after graduation.

The main objectives of the Geoenvironmental Science Internship Program are the following: the student intern will be exposed to the real problems and activities of the community from the perspective of the work organization where he/she is placed; the student intern ideally will be introduced to central activities and projects of the sponsoring organization; the student will have the opportunity and the responsibility for completing a worthwhile project; and the student will have the opportunity to apply geographic and environmental theory, techniques, and knowledge to real-life practices.

Geoenvironmental Studies majors have received internships with a variety of governmental and private agencies. The Governor's Energy Council, Department of Environmental Resources, Governor's Council on Drug and Alcohol Abuse, Department of Community Affairs, and Department of Education have provided internships for our majors at the state level.

Internship placements have been arranged with the Soil Conservation Service; Capital Region Planning and Development Agency; Municipal Planning Office, Washington, D.C.; Montgomery County Planning Commission; United States Geological Survey; Hershey Foods Corporation; Shippensburg Borough; Region VI Energy Center; Dunn Geoscience Corporation; and Environmental Consultants. These internships have provided our students with practical experience to enhance their entrance into the job market.

Some of the positions obtained by our graduates and some of their employers include physical scientist with the federal government; planner, Washington County, Maryland; conservationist, Dauphin County Soil Conservation District; Department of Environmental Resources; head planner, City of Titusville, Florida; physical scientist, United States Geological Survey; Texaco; community research and development consultant; and a Ph.D. candidate, Southern Illinois University.

The Department of Geography-Earth Science is housed in Shearer Hall. Facilities include a cartographic laboratory, air photo-remote sensing facilities, photographic laboratory, data processing center, soils laboratory, rock and mineral laboratory, microclimatological station, air photo and map library, and a wide range of field equipment and instruments for topographic, geologic, land use, meteorologic, hydrologic, soil, and subsurface surveys. A new Apple II microprocessor is located in the department. Graphic tablets and remote sensing packages are available for student use.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: An applicant must meet the minimum standards of the Shippensburg State College Graduate School and must have an undergraduate minimum of (a) 12 hours in geography, or 12 hours in the earth sciences, or a combined total of 18 hours in the two fields; or (b) 15 hours in the social sciences, including six hours of geography, and 15 hours in the natural sciences, including six hours in earth sciences. A student must have a 2.5 average on a 4.0 system or attain an acceptable score on the Miller Analogy Test for acceptance by the Graduate School. Conditional admission may be granted by the Departmental Graduate Faculty Committee for a student lacking the required level of entrance credits. Full admission will be granted after the deficiencies have been corrected and six hours of graduate work successfully completed.

Each student will plan a program on an individual basis with the graduate faculty, ensuring a balanced natural/social science background. For graduation with a Master of Science degree in Geoenvironmental Studies, a student must complete 24 hours of electives in geoenvironmental courses, six hours of electives in the behavioral, social, or natural sciences, and a six-hour internship or a Master's thesis.

Graduate assistantships are available during the academic year and include waiver of tuition fees and carry stipends. Full-time students interested in appointments for the academic year should request applications from the Dean of the Graduate School or the Department Chairman before February 15. Assistantships require two letters of recommendation and a statement of career goals and objectives.

STAFF:

John E. Benhart, Ph.D., Tennessee, 1972, Professor and Chairman—industrial and manufacturing systems, environmental land use planning, New Zealand

Daniel P. DeVitis, Ph.D., Pittsburgh, Associate Professor—landforms, field techniques, soils, terrain analysis, geographic information systems

Philip E. Donatelli, Ph.D. candidate, Maryland, Assistant Professor—air pollution, applied meteorology and climatology

Wallace W. Drexler, D. Ed., Pennsylvania State, Associate Professor—economic geology, paleoecology, oceanography, historical geology

Jane H. Ehemann, Ed.D., Georgia, 1974, Assistant Professor—conservation, urban geography, Soviet Union, Africa

John J. Ford, Ph.D., Michigan State, 1974, Associate Professor—planning methods, transportation, remote sensing, land use controls

Robert C. Harper, D.Ed., Pennsylvania State, 1975, Associate Professor—political geography, cultural environment, historical geography

Kermit Laidig, Ph.D., Nebraska, Professor—geography of Latin America, tropical lands, agricultural land use

Ronald M. McCall, Ph.D., Maryland, Associate Professor—atmospheric environment, climatology, cartography

William C. Rense, Ph.D., Oregon State, 1974, Assistant Professor—physical geography, conservation, energy, water resources

C. Robert Scull, D.Ed., Pennsylvania State, 1974, Professor—Asian geography, curriculum/instruction, cultural environment

William R. Shirk, D.Ed., Pennsylvania State, Professor—environmental geology, applied geomorphology, geologic hazards

TITLES OF THESES COMPLETED 1982:

Master's:

Fox, Richard G. "The Effectiveness of Zoning to Retain Agricultural Land: A Case Study of the Capital Region," 1982.

University of South Carolina

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1963 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A., M.S., M.A.T., I.M.A. in Teaching

GRANTED 7/1/81–6/30/82: 3 Masters

GRADUATE STUDENTS IN RESIDENCE: 22
NOT IN RESIDENCE: 8

CHAIRMAN: Julian V. Minghi

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Director of Graduate Studies, Department of Geography, University of South Carolina, Columbia, South Carolina 29208
Telephone (803) 777-5236

PROGRAMS AND RESEARCH FACILITIES: The department offers graduate programs in geography leading to the Master of Arts, Master of Science, and Master of Arts in Teaching degrees. The M.A. and M.S. programs are designed to prepare students for further graduate study and for employment in such areas as planning, business, government service, and teaching. The M.A.T. program, offered in cooperation with the College of Education, prepares students to teach in the public schools or to pursue further graduate study in the teaching field and in professional education.

The department offers training in fundamental geographic skills and the opportunity for advanced study and research in a variety of fields. Recommended curriculum specializations reflect faculty interest and competency and include Cartography and Remote Sensing, Cultural-Historical, Overseas Development, Recreational, and Urban. Coursework clusters also include Economic and Applied Geography, Environmental Perception and Behavioral Geography, History of Geography, and Regional Studies.

Research facilities include a well-equipped cartographic-photographic laboratory, run by a full-time graphics supervisor, and Remote Sensing and Computer Mapping Teaching and Research Laboratories, equipped with [illegible]T terminals, two graphic digitizers, a digital color densitometer, stereo-facet plotter, satellite image color compositing equipment, and a variety of photo interpretation viewing and measuring instruments. The department maintains a weather station on campus and has comprehensive files of meteorological data including computer tape records. The University library, a member of the select Association of Research Libraries, contains more than 3 million processed volumes; its Map and Air Photo Depository holds 165,000 sheet maps, 1500 atlases, and 45,000 air photos.

The department has excellent facilities for data analysis and computer oriented projects. These include several electronic calculators, a Graf-pen digitizer, keypunch, Tektronix 4013 graphics terminal and CRT terminals. Access to the main university computer (Amdahl V6-II) is readily available through terminals in the department and in the Social and Behavioral Sciences Lab. A vast set of statistical and computer mapping software is available on the system. The department employs a systems analyst and has access to programming and consulting services in the Social and Behavioral Sciences Lab.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* The degree programs require a minimum of 30 semester hours of graduate work. Small, informal classes and seminars offer students the chance to work closely with the faculty, while flexible program requirements offer the opportunity to take related work in other University departments. Specialization in the M.A. and M.S. programs normally is attained through the writing of a thesis in addition to at least 24 semester hours of coursework. There is, however, a non-thesis option in the Cartography-Remote Sensing curriculum; it requires a minimum of 36 semester hours of coursework and the acceptance of two seminar papers as an alternative to the traditional thesis. Knowledge of a foreign language is not required unless a student intends to do field work abroad. The M.A.T. program concentrates on coursework and requires neither a thesis nor a foreign language proficiency. M.A.T. students normally take from 6 to 15 credits in professional education and from 15 to 24 credits in geography. Master's degree students may accelerate their progess by taking advantage of the two summer sessions offered each year. Each summer the department sponsors a field trip in the Southeast for entering students. *Admission Requirements:* Applications are welcome at any time, and students may matriculate at the beginning of any semester or summer session. In support of any application, a student is required to submit official transcripts of all previous study, Graduate Record Examination scores, two letters of recommendation, and a brief written statement describing career objectives and probable specialties. M.A.T. program applicants may elect to submit scores on the National Teachers Examination (NTE) in lieu of the GRE. The Department does not require an applicant to have an undergraduate major in geography; rather it requires evidence of general intellectual ability. *Financial Aid:* Graduate assistantships carry stipends beginning at $3600 for approximately 14 hours per week for the academic year, and include a waiver of general tuition fees. Stipends usually are increased over subsequent semesters of residence. A limited number of summer assistantships ($800 per session) are also available. Course fees for assistants are currently $100 per semester. The normal deadline for Fall semester assistantship applications is March 15; the corresponding deadline for Spring semester applications is December 10.

STAFF:

Allen D. Bushong, Ph.D., Florida, 1961, Associate Professor—history of geography, source materials, cultural, Middle America

David J. Cowen, Ph.D., Ohio State, 1971, Professor and Director of Social and Behavioral Sciences Laboratory—economic, locational analysis, quantitative

John F. Jakubs, Ph.D., Ohio State, 1974, Associate Professor—urban, social, housing, quantitative methods

Robert L. Janiskee, Ph.D., Illinois, 1974, Associate Professor—recreation, resources, environment, futures

John R. Jensen, Ph.D., UCLA, 1976, Associate Professor—remote sensing, cartography

Charles F. Kovacik, Ph.D., Michigan State, 1970, Associate Professor—historical, human, North America

Robert E. Lloyd, Ph.D., Pennsylvania State, 1974, Associate Professor—behavioral, quantitative methods, urban

Paul E. Lovingood, Jr., Ph.D., North Carolina, 1962, Professor—migration, recreation, computer graphics

Julian V. Minghi, Ph.D., Washington, 1962, Professor—political, Europe

Lisle S. Mitchell, Ph.D., Ohio State, 1967, Professor—urban-economic, recreation

John C. Purvis (part-time), M.S., South Carolina, 1969, Teaching Associate—meteorology

Anthony Sas, Ph.D., Clark, 1956, Associate Professor—political-military, Europe, Southeast Asia

Richard G. Silvernail, Ph.D., North Carolina, 1960, Professor—resources, geographic education, small area analysis

William R. Stanley, Ph.D., Pittsburgh, 1966, Professor—transportation, political, developing regions

Theodore R. Steinke, Ph.D., Kansas, 1979, Associate Professor—cartography

John J. Winberry, Ph.D., Louisiana State, 1971, Associate Professor—cultural-historical

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Jakubs, Loretta. "Residential Change in the Rural Landscape: The Rural Non-Farmer in Lower Florence County, South Carolina," 1982.

Thomas, Janet P. "Urban Park Attractiveness," 1981.

South Dakota State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1967 GRADUATE PROGRAM FOUNDED: 1974

DEGREES OFFERED: M.S.

GRANTED 7/1/81–6/30/82: 4

GRADUATE STUDENTS IN RESIDENCE: 25
NOT IN RESIDENCE: 10

HEAD: Edward Patrick Hogan

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Charles F. Gritzner, Graduate Program Coordinator, Department of Geography, South Dakota State University, Brookings, South Dakota 57007
Telephone (605) 688–4511

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers graduate students the opportunity to earn the Master of Science degree. The graduate curriculum is organized through formal courses, seminars, internship experiences and supervised research. Special programs can be taken through a cooperative program with the EROS Data Center. Internships are available with planning districts, governmental agencies and business and industry. The Department of Geography is housed in Scobey Hall. The H.M. Briggs Library contains the largest geography collection in the state. The South Dakota State University Research and Data Processing Center, the Remote Sensing Institute and the Institute of Social Science for Rural and Urban Planning offer related facilities to benefit the student.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: A minimum of thirty semester credits (30) are required for the Master's degree, of which at least 17 must be earned in the major. The thesis accounts for 6 of these credits. Financial aid includes several Graduate Teaching Assistantships.

STAFF:

Orville Gab, M.S., South Dakota State, 1979, Instructor—cartography, physical

Charles F. Gritzner, Ph.D., Louisiana State, 1969, Professor—cultural, developing countries, history and philosophy of geography, geographic education

Janet H. Gritzner, Ph.D., Louisiana State, 1978, Assistant Professor—cultural, remote sensing, anthropology

Edward Patrick Hogan, Ph.D., Saint Louis, 1969, Professor and Associate Dean—South Dakota, human, research, industrial

Gary E. Johnson, Ph.D., Indiana State, 1974, Adjunct Professor—remote sensing, natural resources, planning

Glenn Landis, M.F., Pennsylvania State, 1954, Adjunct Professor—remote sensing, photogrammetry, forestry

Lee A. Opheim, Ph.D., Saint Louis, 1971, Professor—physical, cartography, historical

Robert G. Reeves, Ph.D., Stanford, 1965, Professor—remote sensing, mineral, regional

Larry D. Roberts, Ph.D., Oklahoma State, 1981, Assistant Professor—historical, human, political, remote sensing

Maynard L. Samuelson, M.A., North Dakota, 1965, D.A. Candidate, Northern Colorado, Assistant Professor—planning, economic, industrial, regional

Roger K. Sandness, M.S., North Dakota, 1968, Ph.D. Candidate, Iowa

Arthur Wilner, Ph.D., Michigan, 1973, Adjunct Associate Professor—planning

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Faunce, Jeffery A. "Jackson County, South Dakota: An Area Study," 1981.

Mikkelson, Anthony J. "Recommended Street Trees and Planting Specifications for Brookings, S.D.," 1982.

Welch, Thomas. "The James River Highlands," 1982.

Year, Peggy Ellen. "Ghost Towns in South Dakota: A Geographic Perspective," 1981.

Southern Illinois University at Carbondale

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1936 GRADUATE PROGRAM FOUNDED: 1949

DEGREES OFFERED: M.A., M.S., M.S.Ed., Ph.D.

GRANTED 7/1/81-6/30/82: 3 Masters 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 12 Masters 10 Ph.D.
NOT IN RESIDENCE: 0 Masters 4 Ph.D.

CHAIRMAN: David G. Arey

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Secretary, Department of Geography, Southern Illinois University, Carbondale, Illinois 62901
Telephone (618) 536-3375

PROGRAMS AND RESEARCH FACILITIES: The Geography Department offers Masters' and Ph.D. degrees with concentrations in PHYSICAL-ENVIRONMENTAL SYSTEMS (energy and moisture concepts as they affect local hydrology, soils, natural vegetation, agriculture and landforms); NATURAL RESOURCES MANAGEMENT (the role of resources in economic development and regional planning from a physical, technological, social, economic, and geographical viewpoint; public policy choices for land, air, and water quality management); and URBAN AND REGIONAL PLANNING (the role of demographic, socioeconomic, political, and historical phenomena as they affect spatial policies for urban and regional organization; public and private resource-allocation criteria, planning agency structure and philosophy). Courses dealing with research techniques include the management of spatial data bases, elementary and multivariate statistical models, specialized computer mapping, forecasting methodologies, and principles of research. The graduate program is based upon an interdisciplinary problem-solving perspective and major linkages exist within the university with many other departments

The department is housed in the College of Liberal Arts close to the university's main library and the two I/O areas of our IBM 370/158 System. Interactive computing facilities and a computer programmer are also present in the department and computer digitizing facilities are available. Fully equipped cartographic and climatological laboratories are maintained by the Geography Department. The university library is one of the largest in North America with over 1.8 milion volumes and over 100,000 flat maps served by a full-time librarian.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: All graduate applicants must request application forms for admission. These must be completed and returned to the department by February 15 to ensure consideration for admission and financial support for the Fall semester. Application includes letters of recommendation, transcripts, and a statement of professional goals. All applicants are requested to take the Graduate Record Exams (GRE's) and submit these with their applications. Every applicant is considered for financial assistance and is notified by April 15 of the department decision. Financial awards include teaching assistantships, research assistantships, and University fellowships.

STAFF:

David G. Arey, Ph.D., Clark, 1968, Associate Professor—environmental planning, air quality, land use management

Duane D. Baumann, Ph.D., Clark, 1967, Professor—resource management, environmental perception, natural hazards, water resources planning

Ronald I. Beazley, Ph.D., Purdue, 1953, Professor—economics in geography, resource allocation, planning, public expenditure and projects, quantitative analysis

John J. Boland, Ph.D., Johns Hopkins, 1973, Adjunct Associate Professor—environmental economics, water resources management, public policy analysis

David E. Christensen, Ph.D., Chicago, 1956, Professor—urban and regional planning, cartography, planning theory, citizen participation in planning

John F. Dwyer, Ph.D., S.U.N.Y. College of Environmental Sciences and Forestry, 1975, Adjunct Associate Professor—urban recreation planning, forest recreation, forest economics

A. Doyne Horsley, Ph.D., Southern Illinois, 1974, Assistant Professor—environmental psychology, affective education, inconsistencies between attitudes and behavior toward environment

Daniel Irwin, Ph.D., Syracuse, 1972, Associate Professor—cartography, computer graphics, terrain representation in American cartography

David L. Jones, Ph.D., Pennsylvania State, 1960, Professor—meteorology, earth and environmental sciences; solar, ocean, and alternate energy planning (on leave)

Stanley R. Lieber, Ph.D., Iowa, 1974, Associate Professor—behavioral and spatial analysis, recreation planning, population patterns, quantitative methods

Colin W. Prowse, Ph.D., Southampton, 1982, Assistant Professor—hydrology, urban hydrology, water quality

David M. Sharpe, Ph.D., Southern Illinois, 1968, Associate Professor—climatology, biogeography, land use effects on the global carbon cycle, regional ecosystem analysis

John H. Sims, Ph.D., Chicago, 1964, Adjunct Professor—environmental perception, psychological responses to environmental hazards

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Allton, David J. "An Experimental Approach to Modeling Spatial Choice in the Urban Recreation Environment: A Study of Trail Areas in the Chicago Metropolitan Region," 1982.* Mf., Univ. Microfilms.

Leivo, Carl Eric. "Effects on Area Welfare Measures of Substate Regional Planning Commissions in the United States: A Methodology and Measurement," 1981.* Mf., Univ. Microfilms.

Master's:

Albonico, Sergio. "A Behavioral and Perceptual Analysis of Seating Environments in Shopping Malls: The Interaction of Time and Use," 1981.*

Saltzman, Jean L. "An Evaluation of the Allocation Procedure in Modeling Particulate Emissions from Dirt Roads," 1981. (Research Paper)

Strauss, Robert F. "Modelling Corn-Weather Relations in Illinois, 1957-1977," 1981. (Research Paper)

Southern Illinois University—Edwardsville

DEPARTMENT OF EARTH SCIENCE, GEOGRAPHY AND PLANNING

DATE FOUNDED: 1957 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A. and M.S. in Geography, Master of City and Regional Planning

GRANTED 7/1/81-6/30/82: 7 Geography, 12 Planning

GRADUATE STUDENTS IN RESIDENCE: 18 Geography, 25 Planning
NOT IN RESIDENCE: 8 Geography, 8 Planning

CHAIRPERSON: Harry B. Kircher

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairperson, Department of Earth Science, Geography and Planning, Box 45, Southern Illinois University-Edwardsville, Edwardsville, Illinois 62026
Telephone (618) 692-3620

PROGRAMS AND RESEARCH FACILITIES: Master's degrees in Geography and in City and Regional Planning are offered by the department, emphasizing a problem solving approach. The geography degree accommodates specialization in cultural, economic, regional and physical geography. Planning emphasizes a systems approach incorporating budgeting and management together with land-use planning and design.

The Master of Arts requires a thesis. For the Master of Science two research papers are required. Both degrees require proficiency in quantitative techniques. Students may take either the 48-hour geography Masters or the 72 quarter-hour degree in urban planning. Internships are available. To date, student and faculty research has centered on problems related to the Greater St. Louis Area and the State of Illinois. Topics include problems of air and water quality, mine subsidence, transportation, area development, historic origins, environmental assessment, urban regional resource allocations, and the teaching of geography and earth science.

The department has a cartographic lab and geography lab featuring modern equipment. The department also has a computer workshop with interactive terminals, graphic display terminals, a flatbed plotter, and decwriter terminals. There is also a design workshop containing equipment for construction of three-dimensional models.

Many students receive training in land-use planning and geographic analysis by working in the University's Office of Area Development.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on the quarter system with out-of-state fees approximately $780 per quarter. Graduate admission ordinarily requires a B average or better, but conditional acceptance may be granted in special circumstances. Fellowships and teaching assistantships pay $1800 to $3600 per year plus tuition depending on assignments.

FULL-TIME AND PART-TIME STAFF:

The department has four faculty specializing in Earth Science, nine faculty in Geography, and five in Urban Planning. Eight of the faculty are APA members. Call staff are utilized to supplement teaching of such specialties as photogrammetry and thematic mapping. Environmental assessment is interdisciplinary.

Deipica Bagchi, Ph.D., Oregon State, Associate Professor—resource geography
William B. Baker, Ph.D., Nebraska, Professor—cultural, historical geography
Donald W. Clements, Ph.D., Southern Illinois, Carbondale, Associate Professor—urban quantitative techniques
Charles F. Hess, Ph.D., Michigan State, Professor, APA—economic geography, water resources

Norman C. Johnsen, M.A., Syracuse, Assistant Professor, APA—planning administration

Alfred Kahn (part-time), M.S., Denver, Professor, APA—environmental planning

Harry B. Kircher, Ph.D., Clark, Professor and Chairperson, APA—economic geography, conservation

Robert L. Koepke, Ph.D., Illinois, Professor, APA—area development, industrial location

Fred A. Lampe, Ph.D., Kansas, Associate Professor—geographic techniques, educational geography, Europe

Carl S. Lossau, Ph.D., Northwestern, Professor, APA—urban and regional planning

Loran D. Marlow, Ph.D., Southern Illinois, Carbondale, Associate Professor—earth science

Robert E. Mendelson (part-time), M.U.P., Illinois, Associate Professor, APA—redevelopment, housing (private and public)

Halsey W. Miller, Ph.D., Kansas, Professor—environmental and urban geology

Donald Strohmeyer, M.R.P., Kansas State, Associate Professor, APA—design and physical planning

Alan M. Stueber, Ph.D., UC, San Diego, Associate Professor—mineralogy, geochemistry, physical geology

Noble R. Thompson, Ph.D., Tennessee, Associate Professor—Latin America, cartography

Charles A. Thornton, Ph.D., Tennessee, Professor—quantitative techniques, air mass analysis

Ronald E. Yarbrough, Ph.D., Tennessee, Associate Professor—earth sciences, environmental impact

University of Southern Mississippi

DEPARTMENT OF GEOGRAPHY AND AREA DEVELOPMENT

DATE FOUNDED: 1912 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A., M.S. in Geography, M.S. in Economic Development

GRANTED 7/1/81-6/30/82: 3 Masters

GRADUATE STUDENTS IN RESIDENCE: 17
NOT IN RESIDENCE: 3

CHAIRMAN: Robert W. Wales

FOR CATALOG AND FURTHER INFORMATION WRITE TO: For Geography Dr. Don Williams, and for Economic Development, Dr. Tim Hudson, Department of Geography and Area Development, S.S. Box 5051, University of Southern Mississippi, Hattiesburg, Mississippi 39401
Telephone (601) 266-4729

PROGRAMS AND RESEARCH FACILITIES: The department offers graduate programs leading to the Master of Arts and Master of Science in Geography and the Master of Science in Economic Development.

The degree programs in geography stress concentrations in atmospheric science, urban and regional planning, environmental planning, economic geography, population and cultural systems, and cartographic techniques balanced by staff specialties in a variety of other systematic and regional areas. All programs emphasize fieldwork, the application of technical skills, and the development of a research capability in a particular concentration of geography. All geography master's programs require a minimum of 36 credit hours—including thesis.

The objective of the 42-hour program in Economic Development is to prepare individuals for leadership/practitioner positions at national, regional, state or community levels in the broad areas of economic development, with emphasis on industrial location analysis. A cooperative arrangement with the Mississippi Research and Development Center, probably the most comprehensive economic development agency in the country, is a main feature of the program.

The Department of Geography and Area Development occupies the second floor of the ten-story Johnson Science Tower. The department's facilities include well-equipped classrooms, darkroom, weather station, cartography-remote sensing laboratory, and quantitative laboratory. Laboratory equipment includes a color additive viewer, Zoom Transfer Scope, Zoom 70 Stereoscope and other visual image interpretation equipment, a coordinate digitizer, Decwriter IV and other computer terminals, and access to a Calcomp plotter and Tektronix 4010 CRT associated with the University's Xerox Sigma 9 computer, on which major mapping and statistical software has been implemented. The facilities of the Mississippi Research and Development Center and National Cartographic Information Center are also available to students working under any departmental degree plan. The department publishes *The Mississippi Geographer.*

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University is on the semester system.

Candidates must be accepted by the University Graduate school. Admission to the departmental program is based on GPA, GRE score, three letters of recommendation, the experience record of the student, and the compatibility of his interests with those of the faculty.

Financial Aid: University grants-in-aid, various types of internships, fellowships, and teaching or research assistantships include stipend plus waiver of out-of-state tuition. March 1st is the deadline for applicants seeking financial aid in Geography or Economic Development. Applications for admission without aid will be considered until late spring. Notification of aid awards will be made by April 15.

STAFF AND ASSOCIATED FACULTY:

Ralph D. Cross, Ph.D., Michigan State, 1968, Professor—climatology, meteorology, water resources, watershed management

Tim W. Hudson, Ph.D., Clark, 1980, Assistant Professor—economic development, political, urban, Caribbean

Jesse O. McKee, Ph.D., Michigan State, 1972, Professor—cultural/social, historical, population and human resources, Africa

William M. Roberts, Ph.D., Washington, 1964, Professor—political, economic, location analysis, economic development, U.S.S.R.

Robert W. Wales, Ph.D., Kansas, 1973, Associate Professor and Chairman—economic development, land use planning, resources management, field techniques, Latin America

Donald L. Williams, Ph.D., Kansas, 1977, Assistant Professor—cartography, remote sensing, aerial photo interpretation, computer graphics, and biogeography

Assistant Professor position to be filled in urban and regional planning, community development, and industrial development.

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Belokon, Walter J. "Development and Evaluation of a Methodology Using Landsat Imagery as a Means of Delineating Ecological Planning Units in Central Louisiana," 1981.

Davis, Paul. "Functional Employment Classification of Mississippi Counties," 1982.

Genesse, Jim. "Perception of the Tornado Hazard in Two South Mississippi Communities," 1982.

Southwest Missouri State University

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

DATE FOUNDED: 1972 GRADUATE PROGRAM FOUNDED: 1979

DEGREES OFFERED: M.S. in Resource Planning

GRANTED 7/1/81-5/30/82: 4

GRADUATE STUDENTS IN RESIDENCE: 20

HEAD: Milton D. Rafferty

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor John Catau, General Graduate Advisor, Department of Geography and Geology, Southwest Missouri State University, Springfield, Missouri 65804
Telephone (417) 836-5688 or 5800 (department office)

PROGRAMS AND RESEARCH FACILITIES: The Master's of Science in Resource Planning is designed to provide professional training in resource planning activities that include land resource planning; mineral resources exploration and evaluation; map construction; aerial photograph interpretation and analysis; open space and recreational planning; and computer-based resource analysis and evaluation; and to develop professional resource managers of renewable and nonrenewable natural resources.

The Department of Geography and Geology is housed in Temple Hall which was completed in 1971. Research facilities include: x-ray diffraction; scanning electron microscope; atomic absorption unit; seismic apparatus; gravimeter; and a complete line of surveying and field equipment. An exceptionally good line of equipment is available to support cartography, aerial photo and remote sensing courses. Optical plotters, including ER-55, Kelsh and Zeiss C-8, are housed in modern photogrammetry and cartography laboratories. SMSU also has on-line capability with advanced computer-based land resource analysis systems, including R-GRID, IMGRID, CENTRO, LOCATE, and SYMAP.

Field work is an integral part of the resource planning program. Hands on experience is obtained through work in internships and in the Center for Resource Planning and Management. The department's map library is the largest of its kind in the region with more than 250,000 maps and a growing aerial photo collection. The new SMSU library completed in 1980 adjacent to Temple Hall includes a modern map library designed by department faculty.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on the semester system and has an active summer program of eight weeks. Students seeking admission should request application papers from the Admissions Office. All students must take the GRE. Transcripts and letters of reference must be submitted. Full admission requires a 3.0 average or better, but probational admission may be granted to students with lower grade point averages.

Teaching and research assistantships are available which include waiver of out of state fees.

STAFF:

David Castillon, Ph.D., Michigan State, 1972—physical, environmental, geomorphology, field methods, soils
John Catau, Ph.D., Michigan State, 1973—urban, land use planning, open space and recreation planning
William Cheek, Ph.D., Michigan State, 1976—economic, quantitative methods, research methods, housing
William Corcoran, Ph.D., Michigan State, 1981—climatology, computer mapping, biogeography
Stanley Fagerlin, Ph.D., Missouri, 1980—paleontology, geophysics
Russel Gerlach, Ph.D., Nebraska, 1974—cultural and ethnic geography
Elias Johnson, Ph.D., Oklahoma, 1977—cartography, remote sensing, climatology
V.E. Kurtz, Ph.D., Oklahoma, 1960—remote sensing, photogrammetry
Erwin Mantei, Ph.D., Missouri-Rolla, 1965—geochemistry, geochemical techniques
Donald McInnis, Ph.D., Missouri-Columbia, 1970—meteorology, climatology
James Miller, Ph.D., Wisconsin, 1971—paleontology, biostratigraphy
Thomas Moeglin, Ph.D., Nebraska, 1978—engineering and environmental geology, soils
Milton Rafferty, Ph.D., Nebraska, 1970, Department Head—historical economic geography, population, Missouri
Burl E. Self, Jr., Ed.D., Oklahoma State, 1978—resource planning, urban and regional planning

Kenneth Thomson, Ph.D., Utah, 1970—economic, karst geology, geologic mapping

TITLES OF THESES COMPLETED 7/1/81-5/30/82:
Master's:

Hough, Ronald David. "Little Sac Woods Metro Forest: A Land Management Methodology and Plan," 1981.

Morris, Kent D. "Location of Septic System Failures in Southwest Missouri Using False Color Infrared Photography," 1981.

Sutton, Victoria A. "Toxic Metal Concentration and Distribution in Soils of Four Abandoned Landfill Sites, Springfield, Missouri," 1981.

University of Southwestern Louisiana

DEPARTMENT OF GEOGRAPHY AND CITY AND REGIONAL PLANNING

DATE FOUNDED: 1954 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 4

GRADUATE STUDENTS IN RESIDENCE: 14
NOT IN RESIDENCE: 0

HEAD: Dennis K. Ehrhardt

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Dennis K. Ehrhardt, Box 4-3531, USL Station, Lafayette, Louisiana 70504
Telephone (318) 231-5725

PROGRAMS AND RESEARCH FACILITIES: M.A. program in geography. Twenty-four hours course work plus thesis or 36 hours (non-thesis option). No language requirement. Cartography required if not taken as an undergraduate. The program includes city and regional planning as an area of concentration.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. For admission require 2.5 (on a 4.0 scale) undergraduate grade point average and minimum of 18 hours of geography, but will admit on probation students with lower grade-point averages. Graduate assistantships available on competitive basis pay $3700 for two semesters. Assistants teach two sections of freshmen each semester or assist in research.

STAFF:

O. Douglas Abington, Ph.D., Louisiana State, 1973, Assistant Professor—physical, fluvial geomorphology

Henry W. Bullamore, Ph.D., Iowa, 1978, Assistant Professor—urban, social, political

Mark S. Charnews, Ph.D., Ohio State, 1982, Instructor—transportation, quantitative methods, regional development

Dennis K. Ehrhardt, AICP, Ph.D., Iowa, 1972, Professor—urban, social, urban planning

David C. Johnson, Ph.D., Washington, 1976, Associate Professor—urban planning, population

Timothy F. Reilly, Ph.D., Missouri, 1972, Associate Professor—Africa, Soviet Union, Far East, Europe

Emmett F. Stallings, Ph.D., Florida State, 1970, Associate Professor—water resources, economic

State University of New York at Albany

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A., M.R.P.

GRANTED 7/1/81-6/30/82: 5

GRADUATE STUDENTS IN RESIDENCE: 17
NOT IN RESIDENCE: 3

CHAIRMAN: Floyd M. Henderson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Admissions Office, College of Arts and Sciences, State University of New York at Albany, 1400 Washington Avenue, Albany, New York 12222
Telephone (518) 457-8683

PROGRAMS AND RESEARCH FACILITIES: The master's program in geography is designed to provide individually designed specialization for students preparing for a variety of careers in business, government, or for doctoral work at another university. The department emphasizes training in the systematic fields and techniques through core specialties in: behavioral and social geography, cartography, computer techniques, energy and natural resource management, remote sensing, spatial and mathematical modeling, transportation systems, and urban and regional planning.

In any of these core areas a student may develop, under advisement, a program track specific to his or her interests and academic goals.

Work toward the M.A. includes 30 credit hours. Students are required to enroll in either a graduate research seminar or, with permission, a thesis program. A comprehensive departmental oral examination is also required.

Beginning in Fall 1982 the department will administer a separate two-year, 48-unit professional degree of Master of Regional Planning with specialization tracks in state and regional, urban, and transportation planning.

In each master's program internships are available offering practical on-the-job experience with private businesses and state agencies such as the New York State Departments of Transportation, Energy, Environmental Conservation, and Commerce, Sea Grant Program, local planning commissions, and county governments. An array of supportive courses is available in the University's School of Criminal Justice, Graduate School of Public Affairs, Sociology, Economics, and many other departments.

Facilities available for support of the departmental program include the University Libraries with over one million items, the State Education Library, and well-equipped cartography and remote sensing laboratories including interactive graphics and digital image processing facilities linked by remote terminals to the University's UNIVAC 1100/82 computer. In addition to department and university facilities, location in the state capital affords ready access to the extensive resources of federal, state, regional and municipal agencies within the city.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on the semester plan with additional Summer Sessions. Current University assistantships which carry stipends of $2000 to $4700 are available. The $2000 award carries, in addition, a waiver for half of the tuition. Students are also funded through foundation grants and governmental contract research. In addition there are State University scholarships, National Science Foundation Graduate Traineeships, and the New York State Scholar Incentive Program. Students are required to submit GRE aptitude scores if requesting financial aid.

STAFF:

Stanley F. Blount, Ph.D., Northwestern, 1962, Professor—physical, resource management

Michael W. Dobson, Ph.D., Kansas, 1977, Associate Professor—visual processing and map design, cartography, computer applications in cartography

W. Wayne Heiser, Ph.D., Northwestern, 1965, Associate Professor—Europe, U.S.S.R., political, energy resources

Floyd M. Henderson, Ph.D. Kansas, 1973, Associate Professor—remote sensing applications in land use, urban, and agriculture

Paul D. Marr, Ph.D., UC, Berkeley, 1967, Associate Professor of Geography and Chairman, Regional Planning Program—urban and regional planning, urban, coastal zone management

John S. Pipkin, Ph.D., Northwestern, 1974, Associate Professor—urban, behavioral, mathematical modeling, travel behavior

Christopher J. Smith, Ph.D., Michigan, 1974, Associate Professor of Geography, Regional Planning and Public Policy—behavioral and social, mental health and well-being, substance abuse

Roger W. Stump, Ph.D., Kansas, 1981, Assistant Professor—cultural geography of North America, religion and ethnicity, quantitative methods of regionalization

John W. Webb, Ph.D., Minnesota, 1958, Professor (Dean, College of Social and Behavioral Sciences)—human, especially settlement and population, Europe

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ADJUNCT PROFESSORS:

David T. Hartgen, Ph.D. (transportation planning), Northwestern, 1973—transportation

Sambamurthy Thyagarajan, M.C.P., Ohio State, 1963—urban and regional planning

State University of New York at Binghamton

GEOGRAPHY DEPARTMENT

DATE FOUNDED: 1945 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 9

GRADUATE STUDENTS IN RESIDENCE: 19

CHAIRMAN: John W. Frazier

FOR CATALOG AND FURTHER INFORMATION WRITE TO: John W. Frazier, Chairman, Department of Geography, State University of New York at Binghamton, Binghamton, New York 13901
Telephone (607) 798-2755

PROGRAMS AND RESEARCH FACILITIES: The M.A. degree in geography may be earned by following one of three tracks:

Track 1: General Geography—Designed for students interested in geography within a liberal arts context. Provides disciplinary foundation along classical lines, which can lead to teaching careers, or, combined with history, economics, or other social sciences, can lead to interdisciplinary work in scholarly areas such as conservation, environmental management, economic development, and international studies.

Track 2: Analytical Geography—This track is designed to educate students as geographical/spatial analysts, with particular emphasis on environmental and land use planning. Among the essential components are cartography, remote sensing, field techniques, computer mapping, and mass-data processing. Its objective is career preparation in these areas. To fulfill this goal, practical experience obtained from internships and field research will be integrated into the formal curriculum. Competence resulting from this training also provides the option of pursuing the Ph.D. degree.

Track 3: Geography and Urban Planning—Designed to educate students in urban analysis and planning, with particular emphasis on the integration of the environmental, urban-economic, and institutional aspects of private and public planning. Among the essential components of this program are geographic techniques,

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urban seminars, environmental concerns such as water management, community involvement, and practical experience through internship programs. Similar to Track 2, graduates will be able to work for public and private agencies as well as pursue advanced degrees.

A non-thesis option is available in all tracks.

Extensive use is made of the IBM 370/155 computing system which includes a variety of statistical, simulation, and graphic routines in data analysis and plotting. Departmental facilities include modern cartography, remote sensing, air photo interpretation, and physical geography labs, computer terminals, digitizer, map library, classrooms, lecture halls, and library.

The department publishes the annual *Proceedings of the Applied Geography Conference,* and quarterly publishes *Research in Contemporary and Applied Geography.*

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Admission requirements: Bachelor's degree, or its equivalent, and a reasonable background in geography. The department may require up to five courses of undergraduate work without credit to make up undergraduate deficiencies. Graduate assistantships are offered. Teaching and research assistantships and planning internship stipends are available to qualified candidates. Apply to Dr. John Frazier, Chairman, Department of Geography, SUNY-Binghamton, Binghamton, New York 13901

STAFF:

Morris Budin, Ph.D., New School for Social Research, 1954, Professor—urban planning, economic geography, quantitative

Joseph H. Butler, Ph.D., Columbia, 1960, Professor—water resources, economic, Latin America

John W. Frazier, Ph.D., Kent State, 1976, Assistant Professor—urban-social, retailing, hazards, field methods

Norah F. Henry, Ph.D., Kent State, 1976, Assistant Professor—social, cartography, medical, field methods, computer mapping

Shin-yi Hsu, Ph.D., UCLA, 1967, Professor—cartography/remote sensing, quantitative methods, diffusion of innovations

Burrell E. Montz, Ph.D., Colorado, 1980, Assistant Professor—natural hazards, environmental planning, population and resources management

Lester B. Rowntree, Ph.D., Oregon, 1971, Visiting Professor—cultural/coastal geography, research methods, human ecology, water resources, climatic variability

Nicolay Timofeeff, Ph.D., Columbia, 1967, Associate Professor—quantitative methods, physical

Joseph E. Van Riper, Ph.D., Michigan, 1939, Emeritus Professor

PART-TIME STAFF:

Xin-yuang Huang, B.S., Nanking University, 1961, Visiting Professor—computer cartography

John P. Kowalchyk, M.A., SUNY Binghamton, 1980, Adjunct Lecturer—resources and environmental management

Joseph M. Missavage, M.R.P., Cornell, 1954, Adjunct Associate Professor—urban planning

Richard F. Place, J.D., Union College, Albany, 1968, Adjunct Lecturer—legal aspects of planning.

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Jones, Marianne V. "Objections versus Results in PL-566 Watershed Planning: Little Choconut Creek and Patterson Creek, Broome County, New York," 1982.

Leifer, Lloyd A. "The Development of an Integrated Interactive Geographic Information System utilizing the Geography Department System," 1982.

Loetterle, Francis E. "The Evolution of the American Railroad Network: A Cartographic Analysis," 1982.

Morris, Suzanne L. "The Feasibility of Home Health Care for Older Adults in Johnson City, New York," 1982.

[illegible]allman, Claudia E. "Spatial and Social Aspects of Abortion-Seeking Behavior: A Study of Women from the Twin Tiers of New York and Pennsylvania," 1982.

Svarney, Patricia Barnes. "Ice Jam Prediction Model for the Susquehanna River at Conklin, New York Using Climatological Data," 1982.

Willis, Lucius S. "Urban Enterprise Zones," 1982.

State University of New York at Buffalo

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1962 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 17 M.A., 4 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 39 M.A. 7 Ph.D.
NOT IN RESIDENCE: 2 M.A. 0 Ph.D.

CHAIRMAN: Ross D. MacKinnon

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Director of Graduate Studies, Department of Geography, State University of New York at Buffalo, 415 Fronczak Hall, Amherst, New York 14260
Telephone (716) 636-2722

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers graduate training leading to the degrees of Masters of Arts and Doctor of Philosophy. The general areas of concentration supported by the department are:

Urban and Regional Analysis, Geographic Information Systems and Computer Cartography, Physical Geography and Environmental Analysis, and International Trade.

Opportunity is provided for students interested in pursuing professional careers in government or business, and for those interested in teaching and research. Because many graduates of the M.A. program seek employment in transportation, land use, and natural resource planning and management, a number of courses and research activities emphasize the planning aspects of these fields. Training in the computer manipulation of geographic data sets supports this planning interest. Some of the M.A. programs, such as those in Cartography and International Trade, offer internships in business and government.

Many of the teaching and research activities of the department make heavy use of modern computer technology. The department maintains one of the largest libraries of geographically oriented software in the world, and in addition to standard, university-wide facilities, the department's Geographic Information Systems Laboratory is equipped with a Nova-Eclipse minicomputer system which is used to operate a modern, high-speed interactive graphics and digitizing facility. Cartographic and photographic laboratories are available for instructional and research use and special laboratory facilities are also available for students working on various problems in physical geography and related environmental areas.

The M.A. program may be completed in three semesters. Entering students take a first-semester program which emphasizes the acquisition of a broad background in a variety of substantative areas of the discipline as well as the development of operational skills in such areas as computer applications and statistics.

During the third semester, each student must undertake a major research project demonstrating his or her technical competence and ability to integrate the various aspects of his or her area of specialization.

The departmental Ph.D. program admits superior students who desire in-depth research and technical training as a prelude to careers in education, government, and industry. Programs are designed on an individual basis and students are required to demonstrate acceptable levels of skill in areas such as mathematics, computer applications and statistics.

In addition, the Department, in cooperation with the School of Management, has a joint M.A.-M.B.A. degree option in International Business and World Trade. Students seeking admission to this option must apply to and be accepted by both academic units, they must complete some 76 hours of graduate study, and they must take 6 graduate-level hours of language. Upon completion, the M.A. in Geography, the I.T.C. certificate, and the M.B.A. degree will be awarded.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The university operates on the semester plan with additional Summer Sessions.

There are graduate assistantships awarded to qualified students and the department also attempts to provide summer support for qualified students. In addition, Graduate School Fellowships are available on a universitywide competitive basis.

Applicants must submit GRE scores (verbal and quantitative only), three letters of recommendation, transcripts, and a brief essay detailing their educational objectives and professional interests.

STAFF:

Athol D. Abrahams, Ph.D., Sydney, 1971, Associate Professor—fluvial geomorphology

David Brophy, Ph.D., Wisconsin, 1977, Assistant Professor—cartography

Hugh Calkins, Ph.D., Washington, 1972, Associate Professor—land use, urban and regional planning, geographic information systems

Edgar C. Conkling, Ph.D., Northwestern, 1962, Professor—international trade, land use theory, industrial location

Charles H. V. Ebert, Ph.D., North Carolina, 1957, Professor—pedology and soils geography, environmental impact studies, physical land use problems

Daniel A. Griffith, Ph.D., Toronto, 1978, Assistant Professor—economic, spatial statistics, urban

John S. Haupert, Ph.D., Syracuse, 1955, Associate Professor—arid lands, agricultural, political, Middle East and North Africa

Richard Jarvis, Ph.D., Cambridge, 1975, Associate Professor—biogeography, fluvial geomorphology, climatology, quantitative

Barry Lentnek, Ph.D., Johns Hopkins, 1966, Associate Professor—regional analysis, development, Latin America

Ross D. MacKinnon, Ph.D., Northwestern, 1968, Professor—transportation, quantitative, migration models

Duane F. Marble, Ph.D., Washington, 1959, Professor—geographic information systems, travel behavior, urban

David M. Mark, Ph.D., Simon Fraser, 1977, Assistant Professor—digital terrain models, computer mapping, fluvial geomorphology

James E. McConnell, Ph.D., Ohio State, 1969, Professor—international business and world trade, industrial location, regional development

Richard A. Mitchell, Ph.D., Iowa, 1964, Associate Professor—quantitative, urban

David A. Smith, Ph.D., Michigan, 1959, Associate Professor—transportation, Western Europe

Grant Thrall, Ph.D., Ohio State, 1976, Associate Professor—spatial economic theory, public goods

Michael Wasilenko, M.A., Ohio State, 1975, Cartographic Technician—computer graphics, cartography

Michael Woldenberg, Ph.D., Columbia, 1968, Associate Professor—fluvial geomorphology, network theory

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Hoyte, Donald R. "Impacts of Urban Size and Structure on Industrial Productivity," 1982. Mf., Univ. Microfilms.

Peterson, Michael P. "Image and the Map," 1982. Mf., Univ. Microfilms.

Rogerson, Peter A. "Behavioral and Aggregate Approaches to Migration Modelling," 1982. Mf., Univ. Microfilms.

Roy, Andre G. "Optimality and Its Relationship to the Hydraulic and Angular Geometry of Rivers and Lungs," 1982. Mf., Univ. Microfilms.

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Master's:

Agoes, Asmir. "The International Expansion of Singer Career Systems," 1982.

Bachman, Robert. "Mobility and Deconcentration of Low-income Households: A Study of the Section 8 Housing Assistance Program in Buffalo, New York," 1981.

Barry, Daniel. "The Internationalization Process: A Case Study of Endine, Inc.," 1982.

Diallo, Fanta. "McDonald's Corporation and the Coca-Cola Company: A Comparative Study of the Internalization and Locational Strategies of the Fast-Food and the Soft-Drink Industries," 1982.

Ferrier, Bernard. "Government and Urban Economics: The Mission of the Economic and Market Analysis Division of the U.S. Department of Housing and Urban Development," 1981.

Galkiewicz, Jerry. "Human Resources Information Management System," 1982.

Heisel, Stephen M. "A Study of Stream Competence and Shields' Relation," 1982.

Joyner, Susan L. "Automating Color Map Design: A Designer's Viewpoint," 1982.

Keffer, Steven L. "Spatial Patterns of Surface Soil Properties Under a Mature White Pine," 1982.

Mariano, James C. "The Development Analysis and Implications of an Erie County Export Survey," 1981.

McFarland, S. Diane. "Activity-Transport Characteristics and Life-Cycle Effect on the Propensity to Walk," 1982.

Nicholson, Richard L. "An Application of the Kaiser-Nagel Redistricting Program to Buffalo," 1982.

Papa, Robert J. "A Competitive Profile of the International Market for Industrial Electro-Hydraulic Servovalves," 1981.

Ponczynski, John J. "Post Construction Effects of a Construction Access Road on Fluvial Sediment Characteristics," 1982.

Rothenberg, Alan M. "Automated Production of Multi-Variate Real Estate Maps," 1981.

Russ, Timothy J. "Tariffs: Effects Upon the Foreign Investment Discussion," 1981.

Shilling, Barbara A. "Residential Abandonment in Buffalo, New York," 1982.

Syracuse University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1931 GRADUATE PROGRAM FOUNDED: 1926

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 6 M.A. 4 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 15 M.A. 12 Ph.D.
NOT IN RESIDENCE: 0 M.A. 10 Ph.D.

CHAIRMAN: Robert G. Jensen

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. John Mercer, Chairman of Admissions Committee, Department of Geography, 343 H.B.

Crouse Hall, Syracuse University, Syracuse, New York 13210
Telephone (315) 423-2605/2606

PROGRAMS AND RESEARCH FACILITIES: A theme that provides both continuity and identity to Geography at Syracuse is the study of place and places. Following the pioneer works on China and Latin America by Cressey and James, the regional tradition remains strong and is complemented by studies in a range of systematic fields. These works are neither arid nor abstract but blend a concern for theory with research on real places such as cities and other settlements, regions or countries, and upon the formative processes which give these places their nature and significance.

The prospective student will find opportunities to develop an array of research skills, and to study and implement research with faculty in the following specializations:

Historical Geography: The formation and alteration of regions; areal structures and systems; social geography; themes and interpretation in regional literature; emphasis on North America and Latin America.

Landscape and Place: Interpretations of landscapes as historical creations and as cultural symbols; explorations of concepts of place, especially from humanistic and cross-cultural perspectives.

Culture and Society: Processes of cultural differentiation; religion, language, sex roles, and other elements of the social order; exemplifications in South Asia and North America.

Political Geography: Analysis of political processes at urban, regional, and international scales; political regionalism in long-established states; local political activism in urban settings; the geography of urban administration.

Urban Geography: City structures, with emphasis on inner cities; comparative urbanization; urban housing; colonial settlements in Latin America.

Cartography and Geographic Information Systems: Computer-assisted cartography; cartographic communication and map design; mapping and geographic information systems policy.

Development: Regional structure of development in advanced and less developed countries; rural and agricultural development; flows of capital and labor; political economy and the public sector.

Natural Environment: Biogeography and the ecology of natural environments; human modification of the natural environment; urban physical environments and land use; environmental policy.

Population Geography: Population change and resources; diet and nutrition in African societies; migration and demographic structure in Latin American colonial societies.

Regional Specialization: Much of the systematic work is carried out in regional contexts; most prominent at Syracuse are *North America, Latin America, South Asia, Soviet Union* and *Tropical Africa*. In recent years, for example, students have conducted foreign area research in the Philippines, the Soviet Union, East Africa, and Latin America. Furthermore, the Joint Oxford-Syracuse Project (JOSP), facilitated by Dellplain Assistantships, provides a long-term impetus for historical field research on *Latin American* population and colonial settlement patterns.

Within these clusters, students pursue individually designed programs, assisted by their advisory committee. The goal is to maintain and enhance an open intellectual environment with continuous interaction between graduate students and departmental faculty. In support of this, a number of distinguished scholars and professionals are brought to Syracuse each year for special lectures and seminar sessions. The department maintains a monograph series and a discussion paper series to which faculty and graduate students regularly contribute. A list of discussion papers, one of the most active series in the country, is available upon request.

The department is part of the Maxwell Graduate School of Citizenship and Public Affairs, which is especially strong in the area of public policy, both domestic and foreign, and has important links with the following interdisciplinary programs: Maxwell Development Planning; Metropolitan Studies; Social Science; International Relations; Public Affairs; American Studies; Foreign and Comparative Studies. Training in photogrammetry and remote sensing is provided in the Department of Forest Engineering in the SUNY College of Environmental Science and Forestry. Opportunities for graduate research and tutorials exist with the Urban Forest Research Project, U.S. Forest Service, on questions ranging from the role of vegetation in the urban ecosystem to land use and environmental policy alternatives for metropolitan regions.

Staff offices, classrooms, graduate student offices, an interactive terminal, and the Preston E. James Library are in an air-conditioned building at the center of campus, in easy reach of libraries and the computing center. The Syracuse University Cartographic Laboratory occupies spacious, environmentally controlled quarters in the adjacent Heroy Geology Building. The Laboratory, which includes a complete cartographic darkroom and student laboratory space, provides vital support to the department's teaching and research functions. Assistance for instructional and research purposes is provided by the full-time Staff Cartographer and his assistants. The Laboratory makes available to students its Hewlett-Packard minicomputer, plotter and digitizer.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. *Academic Plan:* The M.A. degree requires 30 credit hours, culminating in either a Master's thesis *or* two Master's papers, and a final oral examination; the choice of a thesis or a non-thesis degree is that of the student and will depend on the student's interests and academic objectives. The Ph.D. degree entails an additional 30 credit hours of courses both inside and outside the department, the writing of an approved dissertation proposal, the satisfactory completion of a combined written and oral qualifying examination, and finally, the successful completion of the doctoral dissertation. Students wishing to enter the Ph.D. program with a Master's degree in hand from another institution are expected to have formed a reasonably clear idea of dissertation plans to facilitate construction of a doctoral program of study. All applicants are encouraged to correspond with individual faculty regarding their special interest in any aspect of the Syracuse program in geography. *Admission:* The department does not subscribe to specific numerical criteria for evaluations of applications; minimum levels normally acceptable, however, for the undergraduate grade point average are about 3.0 (on a 4.0 basis) and for the GRE examinations a combined level of 1100 or above. Samples of written work may be submitted on a voluntary basis (these cannot be returned) to help the department evaluate applications on an individual basis. Applicants must submit transcripts, three letters of recommendation, and GRE scores on the Verbal, Quantitative, and Analytic Tests. The Advanced Geography GRE score is optional.

Financial Aid: Teaching assistantships, research assistantships, and various fellowships are available—applications to be completed by *February 1* and *October 1* for fall and spring admissions respectively. Annual stipends vary from about $4800 to $5500 plus remission of 9 to 12 hours of tuition per semester, making the total value of the awards worth about $9300 to $11,500. Applicants should specify clearly any special regional or topical interests because certain forms of financial aid are so categorized. Applications are invited for a Cartographic Teaching Assistantship and for Dellplain Assistantships in Latin American Geography

STAFF:

John A. Agnew, Ph.D., Ohio State, 1975, Associate Professor—political, social, urban; Chair, Social Science Program

David J. de Laubenfels, Ph.D., Illinois, 1953, Professor—biogeography, climatology, urban physical environments, circum-Pacific

Robert G. Jensen, Ph.D., Washington, 1964, Professor—economic, regional development, Soviet Union

D. Michael Kirchoff, M.A., Wyoming, 1972, Staff Cartographer—cartographic design and production, cartographic management and planning

Donald W. Meinig, Ph.D., Washington, 1953, Maxwell Professor of Geography—historical, cultural and social, landscape interpretation, North America

John Mercer, Ph.D., McMaster, 1971, Associate Professor—urban, political, housing

Mark S. Monmonier, Ph.D., Pennsylvania State, 1969, Professor—cartography and mapping, geographic information systems, automated map design, mapping policy

F. Douglas Muschett, Ph.D., Michigan, 1976, Assistant Professor—environmental policy-resource management, air quality, environmental impact of energy and economic development

James L. Newman, Ph.D., Minnesota, 1968, Associate Professor—population, diet-nutrition, Africa

David J. Robinson, Ph.D., London, 1967, Associate Professor—historical, urban, Latin America

David E. Sopher, Ph.D., UC, Berkeley, 1954, Professor—social, cultural (religions, languages, popular culture), South Asia

One additional position to be filled—economic geography.

ADJUNCT FACULTY:

Rowan A. Rowntree, Ph.D., UC, Berkeley, 1973, Project Leader, Urban Forest Research—land use ecology, environmental policy

Ralph A. Sanders, Ph.D., Minnesota, 1974, Research Scientist, Urban Forest Research—urban, quantitative methods, North America

PROFESSOR EMERITUS:

Preston E. James, Ph.D., Clark, 1923, Maxwell Professor Emeritus of Geography
John H. Thompson, Ph.D., Washington, 1949, Professor Emeritus of Geography

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Kelly, Cathy. "Marriage Migration as a Measurement of Interaction in Massachusetts," 1982. Mf., Univ. Microfilms.

Mohammed, Elberier O. "National Public Policy and Natural Hazards in Developing Countries: Analysis of Absorptive Capacity in Kassala City, Sudan," 1982. Mf., Univ. Microfilms.

Scott, Richard A. "Conflict over Proposals to Locate Low- and Moderate-Income Housing in Suburbs: The Lysander and Rand Tract Cases," 1982. Mf., Univ. Microfilms.

Wyckoff, William K. "Joseph Ellicott and the Western New York Frontier: Environmental Assessment, Geographical Strategies, and Authored Landscapes, 1797-1811," 1982. Mf., Univ. Microfilms.

Master's:

Baldridge, Kenan S. "Changing Electoral Behavior in the Town of Rose, New York," 1981.*

Griffith-Jones, Robin. "Pushing Malnutrition: An Inquiry into the Activities of U.S. Food-Processing Firms in Mexico," 1981.*

Kotch, Joseph A., Jr. "The Mahoning Valley Iron and Steel Industry: Historical Growth and Recent Decline," and "The 1:250,000-scale Map Series of the United States," research papers, 1982.

Mohammed-Adam, Amna. "The History of Central City Annexations in Regional Context," and "Soviet Oil Production in the 1980s: Predictions and Realities," research papers, 1981.

Titus, Ann N. "The Development of a Quantitative Method for the Geographic Inventory of Urban Forests," and "The Utility of the U.S. Geological Survey 1:250,000 Land Use and Land Cover Series for Urban Area Land Use Maps," research papers, 1982.

Wilson, Stephen. "Cartographic Generalization of Linear Information in Raster Mode," 1981.*

Temple University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1961 GRADUATE PROGRAM FOUNDED: 1969

DEGREES OFFERED: M.A.

GRANTED 7/1/81–6/30/82: 3

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 5

CHAIRPERSON: Marilyn Silberfein

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Chairperson, Department of Geography, Temple University, Philadelphia, Pennsylvania 19122
Telephone (215) 787-7691

PROGRAMS AND RESEARCH FACILITIES: The objectives of the Master's program are to prepare students for further study and for jobs in government, industry, and planning. Throughout the program, the major emphasis is placed on training in research techniques and the development of analytical skills that can be applied to problem solving of a geographic nature. Specifically, the department offers core concentrations in data handling techniques and applied geography. The data handling concentration is designed to train the student in cartographic design, computer mapping and remote sensing techniques while the applied concentration provides training for the development of analytical skills used in solving problems related to store location, health care delivery systems, land use planning and environmental policy planning.

The department places some emphasis on the geography of urban areas and metropolitan regions, and the Philadelphia area is used as a laboratory for research. In addition, close ties are maintained with the Urban Studies Program and urban oriented faculty in other departments.

Basic requirements in addition to those prescribed by the Graduate School are (1) a final comprehensive examination and (2) successful completion of either eight courses plus a thesis, or eleven courses. Geography 406 (Geographic Methodology), 404 (Quantitative Methods in Geographical Research), and 464 (Field Methods) are required courses for all students. The full-time student normally takes three or four courses (9-14 semester hours) in a regular semester; the part-time student takes fewer than 9 semester hours. Thus, the full-time student who chooses the non-thesis option will normally need to spend a minimum of three full semesters in residence.

Graduate courses are offered in field methods, quantitative techniques, research design, remote sensing, cartography, computer techniques, regional analysis, land use, the physical environment, economic geography, urban geography, and social and cultural geography. In addition, practical experience is available through supervised teaching and internships.

The department is in Gladfelter Hall, a modern building housing the social science departments. Space and equipment for cartography, air photo interpretation, direct access to the computer, and graduate seminars are contained within the department. Some frequently-used map, book, and journal resources are in the department library; others are in nearby Paley Library. All graduate students are provided with a desk and office space readily accessible to faculty offices and department facilities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. *Admission:* by Graduate School, based upon departmental evaluation of undergraduate transcript, two letters of recommendation, and GRE scores (verbal and quantitative). *Financial Aid:* Teaching assistantships and research assistantships, which carry tuition remission plus a stipend, are available. In addition, limited funds are available for tuition remission alone.

STAFF:

David J. Cuff, Ph.D., Pennsylvania State, 1972, Associate Professor—physical, cartography, energy

Roman A. Cybriwsky, Ph.D., Pennsylvania State, 1972, Associate Professor jointly with Urban Studies—urban, social, neighborhoods

Lane J. Johnson, Ph.D., Clark, 1960, Professor—urban, methodology, settlement systems

John W. Pawling, Ph.D., Michigan State, 1970, Associate Professor—physical, aerial photo interpretation, physical landscapes

George F. Rengert, Ph.D., North Carolina, 1971, Associate Professor—cultural, population, crime

Carolyn J. Ryan, Ph.D., Clark, 1964, Associate Professor—urban, economic, land use planning

Marilyn Silberfein, Ph.D., Syracuse, 1971, Associate Professor and Chairperson—cultural, Africa, environmental perception

John C. Western, Ph.D., UCLA, 1977, Assistant Professor—urban social, cultural, South Africa

William J. Young, Ph.D., Tennessee, 1971, Associate Professor—economic, market areas, health care, energy resources

University of Tennessee

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1914 GRADUATE PROGRAM FOUNDED: 1928

DEGREES OFFERED: M.S., Ph.D.

GRANTED 7/1/81-6/30/82: 2 M.S., 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 20 M.S. 14 Ph.D.
NOT IN RESIDENCE: 6 M.S. 6 Ph.D.

HEAD: Sidney R. Jumper

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Sidney R. Jumper, Department of Geography, University of Tennessee, Knoxville, Tennessee 37996
Telephone (615) 974-2418

PROGRAMS AND RESEARCH FACILITIES: *Programs:* The M.S. and Ph.D. programs permit graduate students to gain both broad and specialized competence and to pursue their own research interests. The department is particularly well qualified to direct studies in the geography of rural and non-metropolitan areas. Other strengths are systems-oriented physical geography; urban geography; geography of economic development; historical geography; and regional geography of the United States (especially the South and Appalachia) and Latin America.

The Master's program requires a minimum of 45 quarter hours. Most students should expect to write a thesis, for which they receive 9 hours of graduate credit, but a non-thesis option for selected students is tentatively scheduled to be available beginning in September 1982. Specific course requirements for the Doctoral program are determined by faculty committee in accordance with interests and needs of the student. Master's degree normally prerequisite to Ph.D. program. A minimum of 15 hours of collateral work, a reading knowledge of one foreign language, and competence in appropriate techniques are required. Written and oral preliminary examination; oral final examination.

Research facilities: The department is convenient to libraries and a wide range of related departments. The University Computer Center is unusually accessible to students and offers excellent short courses and other aids for users. Cartographic, photographic, computer graphics, and remote sensing equipment and a map library are available in the department. The department is currently a partner to research contracts with the National Science Foundation, the Department of Energy, and the Oak Ridge National Laboratory, involving participation by and financial aid for graduate students. Departmental contacts with Tennessee Valley Authority and Oak Ridge National Laboratory have led directly to the employment of graduate students and degree recipients.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Tennessee operates on a quarter system. New graduate students may begin their work during any quarter, although the fall quarter is preferred. Applicants should write to the Department of Geography for particulars on submitting applications. A "B" or higher undergraduate grade average is normally required for admission to a degree program, although admission in a probationary status may be granted to those with lower averages. Students seeking financial aid should file completed applications no later than February 15. Official transcripts of all previous college work, verbal and quantitative scores from the Graduate Record Examination, and at least three letters of recommendation are required.

Several forms of financial aid are available through the department. These include a number of teaching and other types of assistantships which carry a waiver of all tuition and maintenance fees in addition to a stipend. Several part-time research positions have been funded through a contract between the department and the Resource Analysis Group of Oak Ridge National Laboratory. Support is also normally available through research grants and contracts awarded to members of the faculty. University fellowships are available, and applications may be obtained by writing directly to the Vice Chancellor for Graduate Studies and Research.

STAFF:

Charles S. Aiken, Ph.D., Georgia, 1969, Professor—rural, agricultural, Anglo-America, U.S. South

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Thomas L. Bell, Ph.D., Iowa, 1973, Associate Professor—urban, location theory, transportation, quantitative methods

T.J. Blasing, Ph.D., Wisconsin, 1975, Adjunct Assistant Professor—meteorology, climatology

Leonard W. Brinkman, Ph.D., Wisconsin, 1964, Associate Professor—historical, Anglo-America, Appalachia

James R. Carter, Ph.D., Georgia, 1973, Assistant Professor—thematic cartography, computer graphics, climatology

Ronald A. Foresta, Ph.D., Rutgers, 1979, Assistant Professor—public policy and land use, urban systems modeling, resource management

Edwin H. Hammond, Ph.D., UC, Berkeley, 1951, Professor—land-surface systems, land forms, concepts and methods

Sidney R. Jumper, Ph.D., Tennessee, 1960, Professor and Head—utilization of resources, agricultural, economic

Robert G. Long, Ph.D., Northwestern, 1949, Professor Emeritus—Latin America, Asia, cartography

Clarence W. Minkel, Ph.D., Syracuse, 1960, Professor and Dean of Graduate School—Latin America, geography of development

Charles T. Paludan, Ph.D., Denver, 1975, Associate Professor—remote sensing, physical, cartography (assigned to U.T. Space Institute, Tullahoma, Tennessee)

Lydia Mihelic Pulsipher, Ph.D., Southern Illinois, 1977, Assistant Professor—historical, cultural, rural development, Caribbean

Bruce A. Ralston, Ph.D., Northwestern, 1976, Associate Professor—transportation, urban, quantitative methods, diffusion theory

John B. Rehder, Ph.D., Louisiana State, 1971, Associate Professor—cultural, rural settlement, remote sensing

Theodore H. Schmudde, Ph.D., Wisconsin, 1960, Professor—environmental impact of rural land uses, soils, recreational settlement, field methods

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Alvic, Donald R. "Retail Shopping Opportunity Choice in a Small Town: An Examination of Lenoir City, Tennessee Consumers," 1982. *Mf., Univ. Microfilms.

Fox, John S. "The Locational Dynamics of the United States Knitting Industry," 1982. *Mf., Univ. Microfilms.

Hwang, Manik. "Geographical and Structural Change in the Mobile Home Industry in the United States, 1960-1980," 1982. *Mf. Univ. Microfilms.

Master's:

Blue, Jackalie L. "Introducing Situation Variables Into Subnational Commercial Sector Energy Demand Models," 1982. *Mf., Univ. Microfilms.

Skipper, Phillip K. "Constraints on the Utilization of Private, Non-Industrial Landholdings for Biomass-for-Fuel Production," 1981. *Mf., Univ. Microfilms.

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Texas A&M University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1968 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.S., Ph.D.

GRANTED 7/1/81-6/30/82: 1 M.S.

GRADUATE STUDENTS IN RESIDENCE: 12 M.S. 6 Ph.D.
NOT IN RESIDENCE: 1 M.S. 1 Ph.D.

HEAD: Campbell W. Pennington

FOR CATALOG AND FURTHER INFORMATION WRITE TO: The Registrar,
Texas A&M University, College Station, Texas 77843
Telephone (713) 845-1031
For information about department: Head, Department of Geography
Telephone (713) 845-7141

PROGRAMS AND RESEARCH FACILITIES: The department is broadly interested in human and physical geography as exemplified by staff interests listed below. Associated departments in the College of Geosciences provide excellent opportunities for graduate level work in geology, meteorology, and oceanography, while other colleges of the University are able to support advanced study in a variety of natural resources, planning and social science areas.

Specialized interests, many of which are shared by the staff-at-large, include: analysis of man-land relationships with emphasis upon diffusion, technological innovation, and adaptation of social, political, and economic systems; historical geography of settlement and interlinked development of the Atlantic world, with a focus upon various parts of Europe, North America, Middle America and the Caribbean; the social construction of the everyday landscape; culture history of watercraft and their significance as agents of diffusion; cross-cultural and cross-environmental study of environmental perception and cognition; environmental decision-making and its effects upon the cultural landscape; the impact of natural hazards; availability of energy resources; plant migration and speciation; origins of domesticated plants and agricultural systems; soil development as an environmental indicator of landscape chronology; electron microscope investigations of weathering processes; factors affecting urban residential land value; urban environmental quali-ty; spatial impact of residential property taxes; and both qualitative and quantitative methods in geography. The department maintains a Cartographic Service Unit as a research and teaching support facility. Services of the campus Computer Center and the Electron Microscopy Center are available to students.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Texas A&M University is on the semester system. *Admission requirements:*

Bachelor's degree and approval by Department Head, 1000 minimum on GRE. Research, teaching assistantships are available.

STAFF:

George F. Bass, Ph.D., Pennsylvania, 1964, Professor—nautical archeology, Mediterranean culture history

Robert S. Bednarz, Ph.D., Chicago, 1975, Assistant Professor—economic, urban

Earl Cook, Ph.D., Washington, 1954, Professor—environmental and resource analysis

Earl R. Hoskins, Ph.D., Australian National University, 1968, Professor—mineral economics

Peter J. Hugill, Ph.D., Syracuse, 1977, Assistant Professor—social, historical, United States

Clarissa T. Kimber, Ph.D., Wisconsin, 1969, Professor—plant geography, Caribbean

James B. Kracht, Ph.D., Washington, 1971, Associate Professor—geographic educatoin

Christopher Müller-Wille, M.A., Chicago, 1974, Lecturer/Production Supervisor—cartography

Campbell W. Pennington, Ph.D., UC, Berkeley, 1959, Professor and Head—historical geography of the United States, Middle America

Charles Leroy Smith, Ph.D., Georgia, 1977, Lecturer—military geography, Soviet Union

Joseph Sonnenfeld, Ph.D., Johns Hopkins, 1957, Professor—behavioral geography, extreme environments

Frederick van Doorninck, Jr., Ph.D., Pennsylvania, 1967, Associate Professor—nautical archeology

Kenneth L. White, Ph.D., UC, Riverside, 1976, Assistant Professor—physical, soils, geomorphology, cartography

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Diem, John. "The Place-Names of Brazos County, Texas: 1821 to 1880," 1981.

The University of Texas at Austin

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1949 GRADUATE PROGRAM FOUNDED: 1950

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 5 M.A., 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 16 M.A. 8 Ph.D.
NOT IN RESIDENCE: 6 M.A. 2 Ph.D.

CHAIRMAN: Paul W. English

FOR CATALOG AND FURTHER INFORMATION WRITE TO: The Graduate Advisor, Department of Geography, The University of Texas at Austin, Austin, Texas 78712
Telephone (512) 471-5116, 5117

PROGRAMS AND RESEARCH FACILITIES: The graduate program is designed to train modern geographers in specialized areas of research and teaching. The Department places particular emphasis on the interrelationships among seven fields: physical, cultural, remote sensing, urban, political and economic geography, and environmental analysis. The program is oriented to research, although course work may be suggested to remedy academic deficiencies. Students are strongly encouraged to undertake supporting work in allied fields. Ordinarily, a graduate student, especially one at the Ph.D. level, is expected to integrate a thematic specialization with a regional interest. All incoming graduate students are strongly urged to select individual faculty advisors immediately.

University research centers with which the Department has strong and active ties include the Population Research Center, Water Resources Research Center, Bureau of Business Research, Bureau of Economic Geology, Center for Advanced Transportation Studies, the L. B. J. School of Public Affairs, Graduate Program in Energy and Mineral Resources, and Center for Energy Studies. Special area study programs include Latin America, Middle East, Asia, and Europe. Facilities available for student use include a computer center based on a CDC 6600 and a research cartography and remote sensing laboratory, map library, and computational equipment housed within the Department.

Every graduate student will undertake a course on issues and research in geography during his first year of residence. For the master's degree, students must complete 30 to 36 hours of course work with a minimum average grade of B. In addition, proficiency must be demonstrated in one foreign language or in quantitative analysis, and a thesis or two research papers must be written and approved. For the doctorate, students must complete a master's degree or the equivalent, demonstrate proficiency in two foreign languages or one foreign language and quantitative methods, and complete a course in history and philosophy and one in issues and research in geography (if not completed at the master's level). Students are admitted to candidacy upon the successful completion of examinations on geographic methodology and philosophy, the candidate's fields of special research, and dissertation proposal. The Ph.D. degree is granted upon the successful defense of the dissertation.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* Semester System. *Admission Requirements:* (1) Admission to Graduate School, by application; (2) A score of 1000 (combined quantitative and verbal) on the Graduate Record Examination; (3) A "B" average for the last two years of college. Some departmental discretion may be exercised on an individual basis. *Financial Aid:* Fellowships, Scholarships, Teaching Assistantships, Research Assistantships, Cartographic Assistantships, and Map Clerk positions.

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STAFF:

Bharat Bhatt, Ph.D., Syracuse, 1979, Assistant Professor—social-cultural, comparative urban, South Asia

**Alfred W. Crosby, Jr., Ph.D., Boston, 1961, Professor*—environmental, ecological, medical (American Studies)

Christopher Shane Davies, Ph.D., Indiana, 1970, Associate Professor—urban

William E. Doolittle, Ph.D., Oklahoma, 1979, Assistant Professor—historical, cultural

Robin W. Doughty, Ph.D., UC, Berkeley, 1971, Associate Professor—cultural, historical ecology

**David J. Eaton, Ph.D., Johns Hopkins, 1977, Associate Professor*—environmental, urban (L.B.J. School of Public Affairs)

Paul Ward English, Ph.D., Wisconsin, 1965, Professor—cultural, Middle East

George W. Hoffman, Ph.D., Michigan, 1950, Professor—economic, political, East-West Europe

Robert K. Holz, Ph.D., Michigan State, 1963, Professor—remote sensing, cartography, North Africa

**David L. Huff, Ph.D., Washington, 1960, Professor*—spatial design of market systems, consumer spatial behavior (School of Business)

J. Richard Jones, Ph.D., Boston, 1977, Assistant Professor—geomorphology, biogeography, quantitative methodology, coastal zone management

Terry G. Jordan, Ph.D., Wisconsin, 1965, Walter Prescott Webb Chair in History and Ideas, Professor—cultural-historical geography, Texas, Western Europe

**Lorrin G. Kennamer, Ph.D., George Peabody, 1952, Professor*—geographic education, Anglo-America (Dean, UT School of Education)

Ian R. Manners, D. Phil., Oxford, 1969, Associate Professor—Middle East, environmental resource management

James Nasuti, Ph.D., Hawaii, 1978, Assistant Professor—physical, climatology, Asia

Larry L. Patrick, Ph.D., Pittsburgh, 1977, Assistant Professor—Latin America, cultural

Gundars Rudzitis, Ph.D., Chicago, 1977, Assistant Professor—environmental, resources, economic, urban

* Part-time

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Master's:

Ferguson, Kenneth Preble. "Land Cover Mapping of Central Saudi Arabia Using Landsat Imagery," 1981.* Mf., Univ. Microfilms.

Fischer, Linda Kristine. "The Geography of Religion: Structure and Purpose," 1982.* Mf., Univ. Microfilms.

Hall, James Robert. "Potential Agricultural Development in the Hijaz Region of Saudi Arabia," 1982.* Mf., Univ. Microfilms.

Keen, Terri Lynn. "Energy Related Planning—The Texas Coastal Zone: Local Government Participation in the Coastal Energy Impact Program of 1976," 1981.* Mf., Univ. Microfilms.

Smith, Larry Lane. "Cultural Zoogeography of the Nine-banded Armadillo in the United States," 1982.* Mf., Univ. Microfilms.

University of Toledo

DEPARTMENT OF GEOGRAPHY AND PLANNING

DATE FOUNDED: 1963 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 1

GRADUATE STUDENTS IN RESIDENCE: 15
NOT IN RESIDENCE: 8

CHAIRMAN: Eugene N. Franckowiak

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. William A. Muraco, Graduate Adviser, Department of Geography and Planning, University of Toledo, Toledo, Ohio 43606
Telephone (419) 537-2545

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts program is designed to provide a background within the context of departmental faculty interests and related university offerings.

The master's program with geography specialization is designed to provide the opportunity for individualized programs in (a) economic geography; (b) urban geography; (c) environmental perception; (d) physical geography; (e) conservation and management of natural resources; and, (f) international/foreign area development.

The Master's program with planning specialization is designed individually to provide the opportunity for work in (a) urban planning and development; (b) regional planning and development; (c) environmental planning; and, (d) health planning. Appropriate agency internships are an integral part of the planning specialization.

Opportunities for instruction and research are enhanced by close association with graduate programs in economics, sociology and anthropology, psychology, public administration, geology, biology, and in some areas within the colleges of business administration, engineering, and law.

The department occupies newly renovated quarters including modern laboratories. Students have easy access to the facilities of the university libraries (with over one million volumes) and specialized facilities in law, map collections, and government documents. All students have easy access to the regional as well as the university and departmental computation services and to a centralized technological media center.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The program is on the quarter system. All students must complete a minimum of 45 hours of approved study including a nine-quarter hour thesis. There is a comprehensive examination for admittance to candidacy. Also required is either appropriate supervised teaching assistant experience or a planning internship. For most students, two academic years are needed to complete the program.

Applicants should hold a bachelor's degree in geography or a related field. Others are admitted who are willing to take additional appropriate work. Usually a student will present a GPA of at least 2.7 (4.0 scale) and must score satisfactorily on the aptitude Graduate Record Examination.

Graduate teaching assistantships, University and other fellowships, and remunerative half-time graduate planning internships are available to most qualified applicants.

STAFF:

Robert M. Basile, Ph.D., Ohio State, 1953, Professor Emeritus—physical especially climatology, micro-climatology, soils

Basil A. Collins, Ph.D., Michigan, 1973, Associate Professor—Middle East and North Africa, cultural, history of geographical thought

Walter T. Edelen, M.C.P., Georgia Institute of Technology, 1960, Adjunct Associate Professor—urban and regional planning and development, planning administration

S. Lewis Ellis, M.A., Toledo, 1973, Adjunct Assistant Professor—housing and urban redevelopment, urban planning

Byron E. Emery, Ph.D., Michigan, 1963, Professor—political, cultural, regional development planning

Eugene N. Franckowiak, Ph.D., Michigan, 1973, Associate Professor—cartography, Latin America especially Andean America, environmental perception

Lawrence A. Hoffman, Ph.D., Johns Hopkins, 1950, Professor—economic especially development, East and South Asia especially India, historical urban

Donald W. Lewis, Ph.D., Ohio State, 1966, Professor—neighborhood revitalization, environmental planning and resource management, Anglo-America

William A. Muraco, Ph.D., Ohio State, 1971, Professor—economic especially location theory, urban, quantitative research methods

Eugene H. Naujock, M.S., Wisconsin-Milwaukee, 1969, Adjunct Assistant Professor—urban planning and administration, census data analysis

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's

Emein, Komena C. "Organization Model for a Modern Military Cartographic Facility," 1981.

Towson State University

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL PLANNING

DATE FOUNDED: 1955 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 8

GRADUATE STUDENTS IN RESIDENCE: 4
NOT IN RESIDENCE: 35

CHAIRPERSON: James E. DiLisio

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Wayne McKim, Graduate Coordinator, Department of Geography and Environmental Planning, Towson State University, Towson, Maryland 21204
Telephone (301) 321-2966

PROGRAMS AND RESEARCH FACILITIES: The program is designed to provide a broad mastery of the field through a balanced curriculum of topical and regional studies with research experiences. Requirements for the M.A. are the successful completion of 30 semester hours with thesis (36 semester hours without thesis), and a reading knowledge of a modern foreign language or competency in statistical techniques. Two major tracks are available in the program: I. Geography and II. Planning.

The University is situated in the suburban area north of Baltimore. Libraries and research facilities of several large universities and government agencies of Baltimore, Washington, and Philadelphia are within a short distance of the campus. An ample collection of the principal geographical books and periodicals is contained in the library on campus.

An air-conditioned building houses the department and its special facilities which include well-equipped cartography/air photo laboratories, map library, department library, electronic calculators, and audio-visual materials. Computer telecommunications terminals in the department are linked to a UNIVAC 1106 on campus.

The Department has operated a successful internship program since 1970. Internships are available with several private firms and public agencies at the federal, state, and county levels.

Papers in Geography, a discussion paper series, is published by the department and graduate student input is encouraged.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Admission is based on evaluation of individual applicant's experience, transcript of previous course work, and personal references. Conditional admission to a qualifying program may be granted for those lacking prerequisites.

Financial aid includes Graduate Assistantships and paid work within the department.

FULL-TIME STAFF:

Armando da Silva, Ph.D., Hawaii, 1977, Assistant Professor—biogeography, physical, archeoastronomy

Norman R. Diffenderfer, M.A., Nebraska, 1943, Associate Professor—Anglo-America, soils and plant geography

James E. DiLisio, Ph.D., Oklahoma, 1975, Associate Professor—economic, quantitative, energy

Kenneth Haddock, Ph.D., Michigan State, 1975, Assistant Professor—medical, Latin America

Hlib S. Hayuk, M.A., Wisconsin—Milwaukee, 1967, Assistant Professor—Soviet Union, population, military

Wayne L. McKim, Ph.D., Northwestern, 1974, Associate Professor—Africa, cultural

Donald Outen, M.R.P., Johns Hopkins, 1975, A.I.C.P., Instructor—land use, urban planning

Ralph C. Scott, Ph.D., Georgia, 1972, Assistant Professor—meteorology, climatology, geomorphology

Marshall L. Stevenson, M.A., East Carolina, 1968, Assistant Professor—cartography

PART-TIME STAFF:

John Dillon, Baltimore County Office of Planning and Zoning—principles of zoning

David Firman, Professor Emeritus—Asia, environmental studies

Walter H. Kratzmeier, Baltimore County Office of Planning and Zoning—principles of planning, urban design

Robert Marriott, Baltimore County Office of Planning and Zoning—planning implementation, comprehensive planning

Curtis Martin, Professor Emeritus—remote sensing, political, Europe, urban

Peter M. Zimmerman, Attorney at Law—environmental law

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Davis, Vernon. "The Impact of Residential Wood Combustion Devices on the Ambient Air Quality of Baltimore County, Maryland," 1982.

Slater, James. "Site Selection for Thermal Electric Power Generating Stations Utilizing Remote Sensing Data," 1982.

University of Utah

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1947 GRADUATE PROGRAM FOUNDED: 1948

DEGREES OFFERED: M.A., M.S., Ph.D.

GRANTED 7/1/81–6/30/82: 7 Masters, 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 15 Masters 4 Ph.D.
NOT IN RESIDENCE: 5 Masters 0 Ph.D.

CHAIRMAN: Roger M. McCoy

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chung-Myun Lee, Director of Graduate Studies, Department of Geography, University of Utah, Salt Lake City, Utah 84112
Telephone (801) 581–8218

PROGRAMS AND RESEARCH FACILITIES: The Department offers programs leading to Ph.D., M.A., or M.S. degrees. The Master's degree usually requires a thesis, but with departmental approval a non-thesis option may be selected. The Department offers a broad program in systematic and regional geography, techniques, and methodology. Areas of specialization are: Quaternary studies involving geomorphology and climatology applied to paleoenvironmental analysis; urban-economic studies; and natural resources analysis. Strong ties are maintained with allied departments within the University and with many local, state, and federal planning and resource management agencies. The Department faculty cooperate in University-wide regional programs.

Cartographic facilities include a large laboratory and complete reproduction facilities, with a large copy camera and darkroom. The Department's Geographic Research Laboratories have various funded projects mapping land use and resources. Equipment includes a density slicer, map and image digitizers, minicomputer, image compositor, and zoom transfer scope.

The Department places emphasis on field and laboratory techniques and quantitative methods. A growing library of computer mapping and statistical programs is maintained in the Department and at the University Computer Center.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Quarter system. Candidates must be accepted by the University's Graduate School. A 3.00 G.P.A. is required for acceptance. Candidates should have three letters of recommendation and GRE scores sent directly to the Graduate Studies Committee. There are several teaching assistantships ranging in stipend from $4000 to $4500, plus a waiver of tuition. Research assistantships, part-time project work, and summer employment are available. Applications for graduate school and for assistantships are due February 1. Internships may be arranged with federal, state, and local public agencies.

FACULTY:

Elizabeth K. Burns, Ph.D., UC, Berkeley, 1974, Associate Professor—contemporary North American metropolitan structure and planning, roots and directions of urban change

Donald R. Currey, Ph.D., Kansas, 1969, Associate Professor—geomorphology and Quaternary stratigraphy of mountain and desert environments in the western U.S.

Albert L. Fisher, Ph.D., Johns Hopkins, 1954, Professor—comparative welfare systems, residential patterns of elites, applied political geography, Europe

Morris E. Johnson, M.C.P., MIT, 1951, Adjunct Professor—visual quality of urban environments, process for comprehensive planning, physical, social impact on development

Jeanne Kay, Ph.D., Wisconsin-Madison, 1977, Assistant Professor—historical changes in natural environments, wilderness analysis

Paul A. Kay, Ph.D., Wisconsin-Madison, 1977, Assistant Professor—climatology, Holocene environments and climates, dendrochronology

James W. King, Ph.D., Northwestern, 1964, Associate Professor—cultural and economic geography in Africa and the Middle East

Chung-Myun Lee, Ph.D., Michigan, 1961, Professor—land use analysis with the use of aerial photographs and LANDSAT, population migration and redistribution problems, East and Southeast Asia

Roger M. McCoy, Ph.D., Kansas, 1967, Professor and Chairman— remote sensing applications to hydrology, fluvial geomorphology, and resource mapping

Thomas H. Patterson, M.S. candidate, Hawaii, 1982, Cartographer/Lab Manager—cartographic techniques, design cartography, field mapping

Merrill K. Ridd, Ph.D., Northwestern, 1963, Professor—remote sensing and applied geomorphology in resource mapping and land use planning, cartography

ADJUNCT FACULTY AND PROFESSORS EMERITI:

Gene Carr, M.C.P., Ohio State, 1966, Adjunct Professor—urban planning

Richard D. Chong, Master of Architecture, UCLA, 1974, Adjunct Associate Professor—urban planning and design

Vasyl M. Gvosdetsky, Ph.D., Kiev, 1936, Professor Emeritus—soils, physiography, Soviet Union

H. Bowman Hawkes, Ph.D., Ohio State, 1947, Professor Emeritus—climatology, physiography, geographic education, Europe

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Bodendorf, Fred Michael. "Processes Shaping the Intraurban Location of Physicians," 1981.*

King, Guy Quintin. "Morphometry of Great Basin Playas," 1982.*

Master's:

Balice, Randolph Guy. "Remote Sensing of Forest Habitat Types in the Uinta Mountains, Utah," 1981.

Becker, Ralph E., Jr. "Displaying the Land Use Impacts of the Clean Air Act," (non-thesis paper) 1982.

Buchanan, Robert M. "Agricultural Land Conversion in the Salt Lake Valley: Policies and Practices 1950-1980," 1982.*

Erickson, Phillip J. "The Role of Salt Lake City International Airport as an Air Passenger Traffic Hub," 1982.*

Han, Sook-Ja. "Analysis of Land Use Changes Around Salt Lake City Using LANDSAT Digital Data: A Case Study of Sandy," 1982.*

Sack, Dorothy Irene. "Geomorphic and Grain Size Studies of the Lynndyl Dunes, West-Central Utah," 1981.*

Schuchard, Kathleen Marie. "The Distribution of Aspen Stands in Big Cottonwood Canyon, Wasatch Mountains, Utah," 1981.*

University of Vermont

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1965 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A. and M.A.T.

GRANTED 7/1/81–6/30/82: 3

GRADUATE STUDENTS IN RESIDENCE: 8
NOT IN RESIDENCE: 6

CHAIRMAN: Canute VanderMeer

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Program Coordinator, Department of Geography, University of Vermont, Burlington, Vermont 05405
Telephone (802) 656–3060

PROGRAMS AND RESEARCH FACILITIES: The M.A. degree is general in character rather than specialized and requires thirty graduate credits, including six devoted to a thesis. Faculty interests span most systematic aspects of geography. Technique competence includes cartography, remote sensing, and quantitative methods. Regional interests and field experience are virtually world-wide in scope. Vermont, the Lake Champlain Basin, and adjacent areas in Canada and Northern New England provide diverse settings for interesting field work. Among the facilities are a library with a fine collection on Vermont and Canada; a map library; a DEC 2060 computer system with plotter and graphics terminal; and well-equipped cartographic and remote sensing laboratories.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system plus summer sessions. Admission requirements are detailed in the

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Graduate College Bulletin. Applicants should present twelve semester hours or their equivalent in geography and supporting courses in related fields. Persons applying for financial assistance as well as admission should have applications with all supporting materials including GRE scores in the Graduate College by March 1. Some New England students from outside Vermont may be eligible for in-state tuition rates. The Department has six Graduate Teaching Fellowships. The Graduate College has fellowships and scholarships.

STAFF:

H. Gardiner Barnum, Ph.D., Chicago, 1965, Associate Professor—regional and historical geography of Europe, urban, cartography

Andrew R. Bodman, Ph.D., Ohio State, 1978, Assistant Professor—economic, urban, planning, quantitative methods

Daniel W. Gade, Ph.D., Wisconsin, 1967, Professor—cultural, biogeography, South America, Western Mediterranean

Aulis Lind, Ph.D., Wisconsin, 1968, Associate Professor—physical, remote sensing of environment, water resources

Harold A. Meeks, Ph.D., Minnesota, 1964, Associate Professor—physical, rural land use, U.S.S.R., United States, New England

Edward J. Miles, Ph.D., Syracuse, 1958, Professor—political, Canada, Africa, historical geography of the United States and Canada

Charles C. Ryerson, Ph.D., Southern Illinois, 1977, Assistant Professor—applied climatology, physical, computer cartography

Canute VanderMeer, Ph.D., Michigan, 1962, Professor—agricultural, China, Southeast Asia

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Byrne, Timothy P. "The Beverage Container Issue: An Interpretive Analysis of Voting Patterns in New England," 1981.*

Driscoll, Eileen M. "Demographic Variations in North American Cities: A Factor Analytic Approach," 1981.*

Karsh, Allen W. "A Geographic Analysis of Recreational Travel to Vermont State Parks," 1982.*

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Virginia Polytechnic Institute and State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1975 GRADUATE PROGRAM FOUNDED: 1979

DEGREES OFFERED: M.S.

GRANTED 7/1/81-6/30/82: 1

GRADUATE STUDENTS IN RESIDENCE: 15

CHAIRMAN: Robert W. Morrill

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Bonham C. Richardson, Graduate Advisor, Department of Geography, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061
Telephone (703) 961-6886 or 5116

PROGRAMS AND RESEARCH FACILITIES: The department is in the College of Arts and Sciences and offers the M.S. in geography. The program prepares students for a variety of careers as geographers in business, government, research and planning, teaching, or for doctoral work at another university. The M.S. degree requires a minimum of 45 quarter hours of credit, including three core courses—the History and Philosophy of Geography, Geographic Research Design, and a choice among three offerings in particular geographic techniques. Students are encouraged to pursue their own interests and to explore offerings in allied disciplines. The department is notably strong in the cartography-graphics-remote sensing area and also in cultural geography, the human geography of tropical regions, physical geography, and geographic education.

The university library contains 1.5 million volumes, including an excellent collection of serial publications in geography and worldwide coverage of maps and atlases. Departmental facilities include a Spatial Analysis Laboratory, containing a variety of peripheral computing equipment and featuring interactive computer graphics, supported on-line by the university's IBM 370/158 systems and Honeywell Multics System. There is also a remote sensing laboratory, darkroom, and remodeled cartography laboratory in the department area as well as a small departmental library containing the major geographical periodicals.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Admission Requirements*—The graduate program is open to qualified students holding a Bachelor's degree from an accredited college. Nongeography majors are encouraged to apply. At least a B average for junior and senior years is expected. Individual students' backgrounds and interests will be considered in developing programs and course requirements. Quarter System. *Financial Aid*—Departmental

Graduate Assistantships-Stipend $2543-$5085 for three quarters. Some tuition scholarships also available. Graduate students pay no out-of-state fees.

STAFF:

Susan R. Brooker-Gross, Ph.D., Illinois, 1977, Assistant Professor—urban social

James B. Campbell, Ph.D., Kansas, 1976, Associate Professor—physical remote sensing

Charles M. Good, Ph.D., Chicago, 1970, Professor—cultural, medical, Africa

Lawrence S. Grossman, Ph.D., Australian National, 1979, Assistant Professor—cultural ecology, resources, Oceania

Alan M. MacEachren, Ph.D., Kansas, 1979, Assistant Professor—cartography, environmental perception

Thomas A. Maraffa, ABD, Ohio State, Assistant Professor—urban-economic, quantitative

Robert W. Morrill, Ph.D., Clark, 1973, Assistant Professor—political, geographic education

Bonham C. Richardson, Ph.D., Wisconsin, 1970, Associate Professor—cultural, historical, Caribbean

ASSOCIATED PROFESSORS IN OTHER DEPARTMENTS:

James R. Bohland, Ph.D., Georgia, 1970, Associate Professor and Chairman, Urban Affairs—population, settlement, computer applications

Donald Daidone, M.S.L.S., Western Michigan, 1976, Assistant Professor and Assistant Social Science Librarian—history of cartography, map librarianship

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Moisan, Patricia A. "Residential Satisfaction and Mobile Homes in Southwestern Virginia," 1981.

University of Washington

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1935 GRADUATE PROGRAM FOUNDED: 1935

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 15 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 36 M.A. 20 Ph.D.
NOT IN RESIDENCE: 3 M.A. 17 Ph.D.

CHAIRMAN: Richard L. Morrill

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor William B. Beyers, Graduate Advisor, Department of Geography, University of

Washington, Seattle, Washington 98195
Telephone (206) 543-5843

PROGRAMS AND RESEARCH FACILITIES: Individual graduate programs are built around seven research specialties:

Social geography: population and welfare: The study of human population and their settlements, including their size and kind, by ethnicity and race, and by level of well-being and health.

Urban geography/urban studies: The study of the economic base of cities, their internal social and economic structure, including transportation, urban facilities location, medical care, and aspects of social justice and the city.

Regional development and industrial geography: Regional development theory, regional policies, regional economic analysis, industrial location, and linkage studies, location theory and modeling, interregional transfer of technology, corporate spatial behavior and the geography of multinational firms.

Trade and transportation: Flows, network and traffic patterns, practical aspects of operating transportation systems, models of trade and transportation activities.

Environment and natural resource management: Physical processes affecting the landscape, interaction of human activities with the physical environment, land use, energy, agriculture, recreation, environmental planning, impact assessment, natural hazards, environmental quality, water use, methods of resource analysis, public policy analysis, multiple-objective decision-making techniques.

Cartography: Cartographic design and production, automated mapping, techniques of spatial analysis, and graphic communication theory.

The departmental curriculum is flexible, and programs of study are individually arranged to suit the needs of the students. A thesis is required in the M.A. program, which may be devoted to a single topic or may be composed of several high-quality research papers.

The university library contains four million volumes and maintains a separate Edward L. Ullman Geography Library with subscriptions to 500 periodicals and an extensive collection of atlases. Departmental facilities include a spatial analysis laboratory containing several interactive graphics terminals, a micro-computer system, digitizer, and plotter, all tied into the university's CDC CYBER 170/750 main research computer and a VAX 11/780 computer which is devoted to instructional use. There is also a fully-equipped cartography lab, two darkrooms, and extensive cartographic equipment located in the department.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The university operates on a quarter system. Admission to the Graduate School requires a minimum gradepoint average of B (3.0 on a 4.0 scale) during the junior and senior years. Students holding the Master's degree must meet this minimum scholastic requirement, but should also have achieved a higher than B average for graduate studies completed. Applicants must take the GRE. Information for prospective graduate students may be obtained by writing to the Graduate Program Advisor.

THE FACULTY

William B. Beyers, Ph.D., Washington, 1967, Professor (also Graduate Program Advisor)—regional science, economic geography, location theory, regional analysis, environment of the Pacific Northwest

Kuei-sheng Chang, Ph.D., Michigan, 1955, Associate Professor (also School of International Studies)—economic geography of China, historical geography of exploration, Third World development

Douglas K. Fleming, Ph.D., Washington, 1965, Associate Professor—transportation geography (especially ocean and air), regional organization of Western Europe

David C. Hodge, Ph.D., Pennsylvania State, 1975, Associate Professor—urban social and political geography, mass transportation, spatial equity, research methods

W. A. Douglas Jackson, Ph.D., Maryland, 1953, Professor (also School of International Studies)—political systems, nature and culture, Soviet Union, Canada

George H. Kakiuchi, Ph.D., Michigan, 1957, Associate Professor (also School of International Studies)—Japan, agriculture, internal migration, regional geography

Jaime C. Kooser, Ph.D., UC Berkeley, 1980, Assistant Professor—public facility location theory, time geography, social geography, energy policy, resource development

Günter Krumme, Ph.D., Washington, 1966, Professor (also Undergraduate Advisor)—economic geography, regional economics, location theory, organization and decision theory, European regional development and planning

Marion E. Marts, Ph.D., Northwestern, 1950, Professor (also University Ombudsman)—water resources, conservation, resource policy

Jonathan D. Mayer, Ph.D., Michigan, 1977, Associate Professor—urban geography (including historical), transportation, medical geography, geographic philosophy and methods

Richard L. Morrill, Ph.D., Washington, 1959, Professor (also Department Chairman)—spatial organization, migration, diffusion and population, regional planning and development, inequality

John C. Sherman, Ph.D., Washington, 1947, Professor—cartography, graphics communication, remote sensing

Morgan D. Thomas, Ph.D., Queen's (Belfast), 1954, Professor (also Vice-Provost for Academic Programs, The Graduate School)—regional economics, regional planning and development, technical innovation

Joseph Velikonja, Ph.D., University of Rome (Italy), 1948, Professor (also School of International Studies)—social and political geography, international migration, immigrants in America, Eastern Europe

Carl E. Youngmann, Ph.D., Kansas, 1972, Associate Professor—cartography, computer graphics, population

Craig ZumBrunnen, Ph.D., UC, Berkeley, 1973, Associate Professor (also School of International Studies)—natural resource management and conservation, environmental quality, methods of resource analysis, physical, Soviet Union

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TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Hiatt, Charlette Kay. "The Function of Color Legibility of Linear Symbology on Maps for the Partially Sighted," 1982. Mf., Univ. Microfilms.

Master's:

Alu, Matthew Okpani. "Cartography as an Essential Tool in Regional Planning and Development," 1982. Mf., Univ. Microfilms.

Bower, John Arthur, Jr. "The Pacific Northwest Power Supply System: The Present and Future Operation of a Power Pool," 1982. Mf., Univ. Microfilms.

Buckley, Patrick Henry. "A Study of Migration in India: Regionalization of India Based Upon 1961, 1971 Migration Streams," 1981. Mf., Univ. Microfilms.

Campbell, Richard T. "Industrial Growth and Regional Development in Japan: The Case of the Electric Power Industry," 1981. Mf., Univ. Microfilms.

Cohn, Lori Etta. "Residential Patterns of the Jewish Community of the Seattle Area, 1910-1980," 1982. Mf., Univ. Microfilms.

Corr, Michael William. "The Lake Biwa Watershed: Problems of Agricultural and Industrial Pollution," 1981. Mf., Univ. Microfilms.

Diekema, Larry Allen. "Spatial Variations of Defense Contract Awards by DOD Contractors," 1981. Mf., Univ. Microfilms.

MacCready, James Scott. "Technological Processes and Geographical Dimensions of the Product Life Cycle," 1981. Mf., Univ. Microfilms.

Martin, Marilee. "The Geographical Distribution of Federal Civilian Employment, 1967-1978," 1982. Mf., Univ. Microfilms.

McCandless, Laura Lee. "Two Studies in Cartography: A Review of Color Perception Research and the Design of Maps in Travel Advertising," 1981. Mf., Univ. Microfilms.

Palmer, Marjorie Beth. "Residential Woodfuel Use in Western Washington, Estimated 1980 Consumption and Year 2000 Forecast," 1981. Mf., Univ. Microfilms.

Richards, John Brady. "Technology Transfer from Japan to the Transportation Sector of the Soviet Far East, 1970-1980," 1981. Mf., Univ. Microfilms.

Ross, Charles Robert. "Agricultural Land Conversion: A National Perspective and a Local Level Multiple Objective Planning Application," 1982. Mf., Univ. Microfilms.

Snyder, Richard Arthur. "Regional Variations in Air Passenger Generation," 1981. Mf., Univ. Microfilms.

Woo, David. "Map as Expression: A Study of Traditional Chinese Cartographic Style," 1981. Mf., Univ. Microfilms.

Wayne State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1921 GRADUATE PROGRAM FOUNDED: 1932

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 2

GRADUATE STUDENTS IN RESIDENCE: 5
NOT IN RESIDENCE: 19

CHAIRPERSON: Robert D. Swartz

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairperson, Graduate Committee, Department of Geography, Wayne State University, 225 State Hall, Detroit, Michigan 48202
Telephone (313) 577-2701

PROGRAMS AND RESEARCH FACILITIES: The graduate program emphasizes the education of professionals with a broad foundation in geography which will enable them to undertake successfully careers in research, teaching, and community service. Instruction is offered leading to the degree of Master of Arts by thesis or essay option. The core curriculum is followed by specialized work with emphasis on gaining practical experience while the student learns. The department's internship program allows limited credit to be earned for on-the-job training/experience. Applied geographic work in retail location analysis, land use planning and cartography is typical of internship positions.

Of many university-wide facilities, the following deserve special mention: the university and nearby public libraries which together contain more than 3.5 million volumes and 150,000 maps with outstanding special collections in urban affairs, ethnic studies, folklore, Eastern Europe, the Soviet Union, the History of Technology, and the Great Lakes region; the centers for Afro-American Studies, Black Studies, Urban Affairs, American Studies, Soviet and East European Studies, Instructional Technology, Business Research, and the Merrill-Palmer Institute.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:

To be admitted to the Department, an applicant should have an undergraduate major in geography or its equivalent, but intellectual ability, professional potential, and an abiding interest in geography are the main criteria for admission. Each application is judged individually and each program is tailored to the needs and desires of the individual student.

Several types of financial aid in the form of assistantships, fellowships, scholarships, work-study internships, and loans are available from the Department or the Graduate School. Departmental awards usually carry a minimum grant of $3700 and a waiver of tuition fees. Applications for financial aid for the 1982-83 academic year should be submitted before March 1, 1982.

STAFF:

Fred E. Dohrs, Ph.D., Northwestern, 1950, Professor—political, Soviet Union, Eastern Europe

Robert J. Goodman, Ph.D., Northwestern, 1948, Professor—visual techniques, historical

Robert Sinclair, Ph.D., Northwestern, 1955, Professor—economic-urban, Europe

Robert D. Swartz, Ph.D., Northwestern, 1967, Associate Professor and Chairperson—marketing, urban

Bryan Thompson, Ph.D., Clark, 1971, Associate Professor—ethnic settlement, urban

PART-TIME STAFF:

Chester Bolling, B.A., Wayne State, 1973—computer graphics/cartography; Director, Computer Graphics, Detroit Edison Company

Ernando Minghine, M.A., Wayne State, 1970—world regional and physical

John R. Ponton, Jr., M.A., British Columbia, 1972—physical, coastal environmental; Black & Veatch (consulting engineers)

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Schjeldahl, Don. "Urban Reindustrialization and Its Effect on the Spatial Inequality of Urbanization: An Examination of the Central Industrial Park Project, Detroit, Michigan," 1981.

West Virginia University

DEPARTMENT OF GEOLOGY AND GEOGRAPHY

GRADUATE PROGRAM FOUNDED: 1971

DEGREES OFFERED: M.S. (M.A. program in process of approval)

GRANTED 7/1/81-6/30/82: 1

GRADUATE STUDENTS IN RESIDENCE: 9
NOT IN RESIDENCE: 2

CHAIRMAN FOR GEOGRAPHY: Graham D. Rowles

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Gregory A. Elmes, Department of Geology and Geography, West Virginia University, 316 White Hall, Morgantown, West Virginia 26506
Telephone (304) 293-5603

PROGRAMS AND RESEARCH FACILITIES: Graduate study in geography at West Virginia University offers the student a unique opportunity to tailor an inter-

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disciplinary program of study to his or her interests. As part of a combined department with major strengths in geology (a Ph.D. program, and over 60 students in residence), the geography faculty have emphasized the human aspects of environmental problems. Geography students are encouraged to design a program that combines geography with other disciplines in studying both applied and theoretical problems of resource utilization and regional development. Strengths of the faculty lie in the study of energy resource development and utilization, with emphasis on coal, and the social, economic, and environmental impacts of energy systems. A second emphasis is upon issues of regional development. The M.A. program also offers students the opportunity to emphasize human, social and cultural aspects of Appalachian issues.

The university offers an excellent opportunity to study Appalachian and other developing regions through programs such as the Regional Research Institute, the Gerontology Center, the College of Mineral and Energy Resources, Health Services Research Center, and the West Virginia Geological and Economic Survey.

Departmental facilities include a large library of maps and air photos, darkroom and photographic equipment, plus access to data processing and computer graphics facilities. Office and research space is provided for graduate students.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: West Virginia is on a semester system beginning in mid-August.

A bachelor's degree from an accredited college or university with a minimum grade point average of 2.5 is required, and 3.0 is recommended for financial aid. Students may be required to supply scores from the GRE. Graduate teaching and research assistantships are available on a competitive basis. Assistantships include full tuition waiver.

FULL-TIME AND PART-TIME STAFF:

Frank J. Calzonetti, Ph.D., Oklahoma, 1978, Assistant Professor—energy, spatial modeling, technology assessment, resources

Gregory A. Elmes, Ph.D., Pennsylvania State, 1979, Assistant Professor—spatial modeling, research methods, transportation, quantitative methods

Robert Q. Hanham, Ph.D., Ohio State, 1973, Associate Professor—urban and regional systems, economic development, employment studies, quantitative methods

Richard S. Little, Ph.D., Syracuse, 1961, Associate Professor—regional development, census geography, computer graphics, self-sufficient communities

Kenneth C. Martis, Ph.D., Michigan, 1976, Associate Professor—political, resource and environmental policy, historical geography

Graham Rowles, Ph.D., Clark, 1976, Associate Professor—geography of the elderly, social, urban, geography and planning, environmental cognition

Ruth Anderson Rowles, M.S., Wisconsin, 1976, Assistant Professor (part-time)—cartography

Barry Solomon, Ph.D. candidate, Indiana, Visiting Assistant Professor of Geography and Mineral Economics—energy policy, resource planning, economic, quantitative methods

AFFILIATED STAFF:

Robert E. Behling, Ph.D., Ohio State, 1971, Associate Professor of Geology—glacial geology, geomorphology, weathering in cold desert regions of Antarctica

Alan C. Donaldson, Ph.D., Pennsylvania State, 1959, Professor of Geology and Department Chairman—sedimentology, stratigraphy

William H. Miernyk, Ph.D., Harvard, 1953, Benedum Professor and Director, Regional Research Institute—regional economics

Dennis A. Poluga, M.A., Ohio State, 1968, Adjunct Assistant Professor of Geography and Director, Region VI Planning and Development Council, West Virginia—regional planning

Henry W. Rauch, Ph.D., Pennsylvania State, 1972, Associate Professor of Geology—hydrogeology and water quality, environmental geology

Adam Z. Rose, Ph.D., Cornell, 1974, Associate Professor and Chairman, Department of Mineral Economics—resource economics, energy economics, regional science

Jay S. Sanders, M.R.P., Pennsylvania, 1976, Adjunct Assistant Professor of Geography and Director, Mid-Ohio Valley Regional Planning Council, West Virginia—regional planning

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Karmazinski, Paul L. "The Potential Effects of Site and Operational Characteristics on Water Quality in the Surface Mining of Upper Freeport Coals in Preston County, West Virginia," 1982.

Western Illinois University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1917 GRADUATE PROGRAM FOUNDED: 1947

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 7

GRADUATE STUDENTS IN RESIDENCE: 24
NOT IN RESIDENCE: 4

CHAIRMAN: A. Richard Longwell

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Arlin D. Fentem, Chairman, Graduate Committee, Department of Geography, Western Illinois University, Macomb, Illinois 61455
Telephone (309) 298-1646 or 1648

PROGRAMS AND RESEARCH FACILITIES: The department offers three options within its M.A. degree program: thesis; non-thesis; and development plan or

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project report. All programs share a balanced core of experience in four areas: theory and methodology, physical, cultural, and regional. Beyond this, candidates may choose to concentrate in resource and regional analysis (including cartography and remote sensing), physical, cultural and regional geography, or regional and rural planning. The thesis option is intended for those who plan to enter a doctoral program and/or do serious research; the non-thesis option provides a broad background in geography verified by comprehensive examinations in six areas following course work; the development plan report is designed for those who intend to enter the planning field. The report, followed by an oral examination, is ordinarily developed as part of an internship assignment with a planning agency.

Department facilities are housed in Tillman Hall and include: the University's Map Library and reading room with 140,000 maps, 14,000 air photos, and 2,500 atlases; office space for all full-time graduate students; cartography laboratories with copy cameras, enlarger-reducers, graphic arts darkroom, headliner and photo typesetter, and programs for computer mapping; remote sensing laboratory with zoom transfer scope, Bausch and Lomb interpretation system, dual stereoscope, mirror stereoscopes and imagery light tables; a well-equipped earth materials analysis lab with access to an x-ray diffractor, spectroscope, and other instrumentation; meteorology and microclimatology facilities including weather stations, an Alden weather chart recorder, and a Sperry weather radar unit with DENRAD colorizer; computer facilities that include a keypunch, a computer terminal, a continuous mode Numonics electronic digitizer, and an IBM microcomputer with line printer and video monitor. Supporting university facilities include a new million-volume library with computer bibliographic search and PLATO; IBM 370/155 computer with 2 million bytes storage, telecommunication links to a CDC Cyber 72 computer, Data General Eclipse minicomputer, and a CALCOMP plotter. The editorial office of the *Journal of Geography* and the central office of the National Council for Geographic Education are accommodated by the department.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Degree programs require 32 semester hours of credit except that concentration in regional and rural planning requires 38 hours. Western Illinois University operates on a semester system beginning late August and ending mid-May. Eight- and four-week summer sessions are offered simultaneously. Admission requires that the applicant have a Bachelor's degree from an accredited institution and an overall grade-point average of at least 2.5 (on a 4-point scale), or a grade-point of at least 2.75 for the last two years of undergraduate work. Applicants should have completed at least 24 semester hours of geography. The Graduate Record Examination is required.

Department graduate teaching, cartographic and editorial assistantships are awarded to 15 students each year, and an additional four to six students, usually in the second year of graduate study, are supported by public planning agencies in cooperation with the Institute for Regional Rural and Community Studies mentioned above. Assistants receive monthly stipends and their tuition charges are waived.

FULL-TIME AND PART-TIME STAFF:

John J. Alford, Ph.D., Kansas, 1968, Professor—paleogeography, climatology

John V. Bergen, Ph.D., Indiana, 1964, Professor—map curator, human, Anglo-America, air photo

John F. Blauvelt, M.S., Colorado, 1962, Assistant Professor—cultural, Middle East

Arlin D. Fentem, Ph.D., Wisconsin, 1974, Associate Professor—agriculture, Anglo-America, thematic cartography

Robert E. Gabler, Ed.D., Columbia, 1957, Professor—physical, geography in education, Europe

David W. Ganyard, Ph.D., Ohio State, 1967, Associate Professor—economic, historical, Africa

Donald W. Griffin, Ph.D., Clark, 1963, Professor—urban geography, regional planning, rural development

Fred E. Kohler, Ph.D., Ohio State, 1971, Associate Professor—water resources, climatology, meteorology

Lawrence T. Lewis, Ph.D., Clark, 1971, Associate Professor—quantitative methods, urban

A. Richard Longwell, Ph.D., Nebraska, 1974, Professor—field methods, Middle America

Ronald E. Nelson, Ph.D., Nebraska, 1970, Professor—historical-cultural settlement, Soviet Union

Siyoung Park, Ph.D., Minnesota, 1977, Assistant Professor—urban, regional planning, geography of development

Richard L. Rieck, Ph.D., Michigan State, 1976, Associate Professor—Pleistocene geomorphology, physical, remote sensing

Russell G. Swenson, Ph.D., Wisconsin-Milwaukee, 1977, Associate Professor—cultural, environmental perception, human ecology

James W. Vining, M.A., Oklahoma, 1963, Associate Professor—conservation, soils

Daniel Wise, Ph.D., Ohio State, 1979, Associate Professor—climatology, computer cartography, quantitative methods

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Al-Mayyal, Ahmad Y. "Immigrants' Effects on the Functioning of the State of United Arab Emirates," 1982.*

Bishop, John A. "The Applications System Verification and Transfer (ASVT) Project Plan: A Satellite Remote Sensing Program for Illinois," 1982.*

Bolduc, Steven J. "An Investigation of the Origin of Glaciated and Unglaciated Underfit Rivers in Illinois," 1982.*

Hassan, Phyllis M. "An Evaluation of Income, Employment, and Migration Change in Southern Illinois Counties Funded by the Economic Development Administration," 1981.*

Marcioni, Steven. "Net Migration in Nonmetropolitan Illinois: 1950-1976," 1982.

Miller, Dave B. "Determining the Need for Branch Bank Services: A Regional Analysis," 1982.*

Petersen, William P. "An Evaluation of City of Petersburg Economic Development Strategy," 1981.*

Western Kentucky University

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

DATE FOUNDED: 1907 GRADUATE PROGRAM FOUNDED: 1967

DEGREES OFFERED: M.S., M.A. in Education with a Geography Major, Master of Public Service in City and Regional Planning

GRANTED 7/1/81-6/30/82: 5

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 5

HEAD: Wayne L. Hoffman

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Studies Advisor, Department of Geography and Geology, Western Kentucky University, Bowling Green, Kentucky 42101
Telephone (502) 745-4555/6

PROGRAMS AND RESEARCH FACILITIES: The topical emphases in Western Kentucky University's graduate geography programs include social, physical, urban, and economic geography, and city and regional planning. Regional emphases are possible in Africa, Latin America, and North America. Emphasis in all degree programs is placed on analysis of problems that have an applied aspect and consequently have implications for policy development. Programs are tailored to the student's interests and normally include courses in other departments.

Programs and Requirements—The Master of Science Degree, designed to prepare students for a variety of jobs and to become candidates for the Ph.D., requires a minimum of thirty semester hours of coursework, a thesis (or additional coursework in lieu of a thesis), plus either a reading knowledge of one language or a demonstrated proficiency in a research technique.

The department also administers the Master of Public Service Degree in City and Regional Planning, an interdisciplinary program designed to train public officials for service at local and state levels.

Graduates of the Geography and Planning Program are serving in a variety of discipline-related jobs around the country, and some are in both geography and planning Ph.D. programs in several major universities.

Research facilities include all standard laboratories, computer terminals, and access to a 360-75 computer, the College Heights Weather Station and State Climatology Center, a map library, and the university's graduate library. Members of the geography faculty are currently participating in research concerning transportation, social geography, water problems, climate and weather analysis, cave development, and historic preservation. In addition, field research by faculty and students is conducted continually in the local area, in several other states, and in Latin America.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:
Admission Requirements: An undergraduate degree with G.P.A. of 2.8 or higher (on a 4.00 scale), or a combined GRE score of 800. Semester System. *Financial Aid:* A number of teaching and research assistantships are available with stipends ranging between $2700 and $4000 for the academic year.

STAFF:

S. Reza Ahsan, Ph.D., Florida, 1963, Professor—cartography, air photo interpretation, remote sensing, Latin America, Eastern Africa

James M. Bingham, M.A., Memphis State, 1965, Ph.D. candidate, Indiana State, Assistant Professor—economic, urban, city and regional planning, Southeastern United States

Doral Glen Conner, M.S., Western Kentucky, 1976, Assistant Professor—geomorphology, aviation meteorology; State Climatologist

Nicholas Charles Crawford, Ph.D., Clark, 1977, Professor—geomorphology, hydrology, climatology

James L. Davis, Ph.D., Northwestern, 1964, Professor and Vice President of Academic Affairs—urban transportation, economic, North America

Ronald R. Dilamarter, Ph.D., Iowa, 1972, Professor—geomorphology, cartography, karst studies

Edmund E. Hegen, Ph.D., Florida, 1962, Professor—regional development, conservation of resources, geographic thought, Latin America

Wayne L. Hoffman, Ph.D., Florida, 1970, Professor and Head—city and regional planning, urban, economic

Mark Lowry II, Ph.D., Syracuse, 1973, Professor—city and regional planning, urban, social

Conrad T. Moore, Ph.D., UCLA, 1972, Associate Professor—resource management, biogeography, environmental perception

Albert J. Petersen, Ph.D., Louisiana State, 1970, Associate Professor—cultural, geographic education, geographic thought, Great Plains

Claude E. Pickard, Ph.D., Nebraska, 1969, Professor—economic, settlement patterns, manufacturing, North America

L. Michael Trapasso, Ph.D., Indiana State, 1980, Assistant Professor—climatology, geomorphology, remote sensing

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Giles, Alice Faye Brooks. "A Case Study: Neighborhood II Conservation Plan," 1981.

Cubbage, James. "Hydrology of the Sinking Creek System, Logan and Simpson Counties, Kentucky," 1981.

Western Michigan University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1905 GRADUATE PROGRAM FOUNDED: 1964

DEGREES OFFERED: M.A., M.A.T.

GRANTED 7/1/81–6/30/82: 9

GRADUATE STUDENTS IN RESIDENCE: 11
NOT IN RESIDENCE: 3

CHAIRMAN: Joseph P. Stoltman

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Charles F. Heller, Graduate Adviser, Department of Geography, Western Michigan University, Kalamazoo, Michigan 49008
Telephone (616) 383-1839

PROGRAMS AND RESEARCH FACILITIES: The M.A. degree program in Geography provides a solid foundation in the subject and at the same time permits specialization. Thirty hours of approved graduate credits must be completed, with at least twenty hours in geography. All students take seven hours of core courses in Geographic Research and Quantitative Methodology, then develop a three-course concentration (minimum) in one of five areas: Community Development and Planning, Economic and Urban Geography, Environmental and Resource Analysis, Physical Geography, or one of four regional specialties.

A 30-hour M.A.T. degree program in Geography is designed to improve the classroom teacher's competencies in the teaching of geography. Substantive content in geography and related disciplines is combined with professional development in elementary or secondary education.

The Department possesses fully equipped cartography, computer mapping, aerial photo, and quantitative laboratories which include a map enlarger, lettering and scribing equipment, reproduction and darkroom facilities, sketch masters, height finders, mirror stereoscopes, electronic desk calculators, an electronic analog computer, CRT and hard-copy remote terminals.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Graduate courses are concentrated in the Fall and Winter semesters, although graduate study may be accelerated by utilizing fully the trimester schedule of the University. Students with a 2.7 grade-point average (A = 4.0) during the last four semesters of undergraduate work are eligible for admission to the program. University and Departmental Harrison Fellowships with no duties are granted to eligible students each year. Assistantships coincide with the Fall and Winter semesters (September through April). Applications for financial assistance must be supported by two letters of recommendation and transcripts of undergraduate work. All Fellows and

Assistants are provided office space, and the same is normally true for all other graduate students.

STAFF:

David G. Dickason, Ph.D., Indiana—economic development, quantitative methods, South Asia

Val L. Eichenlaub, Ph.D., Ohio State—climatology, Anglo-America, physical

Rainer R. Erhart, Ph.D., Illinois—remote sensing, physical, biogeography

Charles F. Heller, Ph.D., Illinois—agriculture, urban social, historical

Oscar H. Horst, Ph.D., Ohio State—physical landscapes, peasant societies, Latin America

Eugene C. Kirchherr, Ph.D., Northwestern—urban, planning and zoning, Subsaharan Africa

Philip P. Micklin, Ph.D., Washington—U.S.S.R., conservation, environmental impact assessment

Eldor C. Quandt, Ph.D., Michigan State—population, Scandinavia, ethnic studies

Henry A. Raup, Ph.D., Illinois—national parks, conservation, Western Europe

Hans J. Stolle, Ph.D. candidate, Wisconsin-Madison—cartography, computer graphics, remote sensing

Joseph P. Stoltman, Ed.D., Georgia—geographic education, cultural, Latin America

George Vuicich, Ph.D., Iowa—geographic education, urban, quantitative methods

Western Washington University

DEPARTMENT OF GEOGRAPHY AND REGIONAL PLANNING

DATE FOUNDED: 1960 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.S.

GRANTED 7/1/81–6/30/82: 5

GRADUATE STUDENTS IN RESIDENCE: 17
NOT IN RESIDENCE: 12

ACTING CHAIRMAN: James H. Hitchman

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. James W. Scott, Department of Geography and Regional Planning, Western Washington University, Bellingham, Washington 98225
Telephone (206) 676–3278

PROGRAMS AND RESEARCH FACILITIES: The M.S. Program in Geography and Planning provides for concentrations in either geography or planning. A number of core courses are taken by all students in the program, followed by specialized courses, seminars, colloquia or studios in one or the other of the concentrations.

For those specializing in geography there are opportunities for research in Climatology, Biogeography, Urban Economic Geography, and Historical Geography.

For those specializing in planning, research opportunities are offered in Environmental Planning, Regional Development, Small Town and Rural Planning, and Water Resource Planning and Management.

The department has an extensive map collection organized by a full-time curator; a media laboratory under the direction of a staff cartographer; a cartographic laboratory; graduate research room; graduate offices; departmental Tektronix vector graphics terminal, Tektronix interactive digitizing plotter and Calcomp plotter; and access to the university's IBM 360/50 computer and interactive terminal system.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Quarter system, including summer. An undergraduate major in geography or planning with grade point average 3.0 (4-point system) or better is normally required for admission to graduate degree status. Teaching assistant stipends are $3,924 for the academic year; application deadline March 15, 1982. This deadline is especially important to those who apply for financial assistance. In addition the department has three scholarships it disburses each year; one for $1,200 and two for $900. Application for these is required by April 15, 1983.

STAFF:

Janet R. Collins, B.S., Western Washington, 1974, Map Curator

Howard J. Critchfield, Ph.D., Washington, 1952, Professor—climatology, Southwest Pacific (Washington State Climatologist)

James H. Hitchman, Ph.D., UC, Berkeley, 1966, Professor—maritime history, U.S. history

Eugene A. Hoerauf, M.A., Oregon, 1969, M. Libr., Washington, 1976, Cartographer

Kenneth J. Langran, Ph.D., Wisconsin, 1979, Assistant Professor—quantitative methods, remote sensing, computer cartography, water resources

Robert L. Monahan, Ph.D., McGill, 1959, Professor—resources, Northlands, Canada (Director, Canadian-American Studies)

Debnath Mookherjee, Ph.D., Florida, 1961, Professor—South Asia, urban geography, planning (Director, Urban and Regional Planning Program)

Gilbert A. Peterson, Ph.D., Washington, 1975, Associate Professor—regional planning, computer graphics

Franklin C. Raney, Ph.D., UC, Davis, 1962, Associate Professor—water resources, biogeography, soils (on leave, Spring 1982)

James W. Scott, Ph.D., Indiana, 1971, Professor—historical, cultural, population (Director, Center for Pacific Northwest Studies)

Richard G. Smith, Ph.D., Wisconsin, 1965, Associate Professor—landforms, United States, Canada, Arctic, conservation

Thomas A. Terich, Ph.D., Oregon State, 1973, Associate Professor—urban and regional planning, coastal studies, environmental hazards

Robert W. Teshera, Ph.D., Washington, 1970, Associate Professor—political, United States, Canada

Manfred C. Vernon, J.D., Berlin, Ph.D., Stanford, Honorary Lecturer in Political Geography, Environmental Law, Law of the Sea

ADJUNCT FACULTY:

Richard H. Berg, Ph.D., Washington, 1970, Associate Professor—remote sensing, quantitative methods, water resources

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Bachelor, Carl F. "Subsidence Over Abandoned Coal Mines: Bellingham, Washington," 1982.*

Brandt, Theodore R. "Agricultural Land Retention in the Puget Sound Region, Washington," 1982.*

DiDomenico, Anthony Thomas. "Vegetation Patterns at the Time of American Settlement in the Nooksack Lowland, Whatcom County, Washington," 1982.*

Hostetler, Timothy. "Investigation of the Withdrawal of Land Under the Open Space Taxation Act in Whatcom County, Washington," 1982.*

Lewis, Gail. "Automated Point Labelling for Geographic Data Bases," 1982.*

University of Wisconsin

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1928 GRADUATE PROGRAM FOUNDED: 1928

DEGREES OFFERED: M.S. (Geography), M.S. (Cartography), Ph.D. (Geography)

GRANTED 7/1/81-6/30/82: 3 Masters, 3 Ph.D

GRADUATE STUDENTS IN RESIDENCE: 21 M.S. 16 M.S. (Cart.) 25 Ph.D.
NOT IN RESIDENCE: 1 M.S. 12 Ph.D.

CHAIRMAN: William M. Denevan

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Committee on Graduate Appointments, Department of Geography, The University of Wisconsin, Madison, Wisconsin 53706
Telephone (608) 262-2138 (Department)
(608) 262-3861 (Graduate Office)

PROGRAMS AND RESEARCH FACILITIES: The Department offers a broad range of programs in systematic and regional geography, and a separate M.S. program in cartography. The Department cooperates freely in both graduate instruction and research guidance with numerous other departments of the University. It plays an active role in such interdisciplinary programs as African Studies, American Institutions, Asian Studies, Ibero-American and Luso-Brazilian Studies, Population Studies, Urban and Regional Planning, Environmental Studies, and Water Resources.

An unusual variety of facilities for graduate study and research exists in Madison. Grouped conveniently in Science Hall with the Geography Department are the Geography Library, the University's Map and Air Photo Library, the Cartographic Laboratory, and a geomorphology laboratory. Only a few hundred yards separate Science Hall from the central University Library and the State Historical Society Library. Nearby are specialized reference libraries and the main computing center of the University. Madison, the state capital, houses most divisions of the state government and several federal agencies.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The types of financial assistance include the following appointments:

Teaching Assistantships: Duties ordinarily include about 5 to 8 hours per week of classroom teaching, for which the salary currently ranges from $5003 to $7904 for the academic year.

Project and Research Assistantships: Duties involve the assistance of either staff members in their research projects or under the supervision of the Director of the University Cartographic Laboratory. Such duties total not more than 20 hours per week. The salaries currently range from $4775 to $7236.

University Fellowships: These awards, requiring no departmental duties, are available through a competitive program administered by the Graduate School. They currently yield $7002 for the academic year, plus remission of non-resident tuition fees. Advanced Opportunity (Minority) Fellowships are also available.

Departmental Fellowships: The Department awards two Whitbeck Fellowships and one or two Trewartha Fellowships.

Appointments are usually for 9 months (September to June, inclusive) and holders normally are exempt from the non-resident tuition fee which currently is $1458 per semester, although they must still pay fees which are currently $715 per semester.

STAFF:

Waltraud Brinkmann, Ph.D., Colorado, 1973, Associate Professor—climatology, natural hazards (also Director, Center for Geographic Analysis, Institute for Environmental Studies)

Reid Bryson, Ph.D., Chicago, 1948, D.Sc., Denison, 1971, Professor—climatology, environmental science (also Director, Center for Geographic Analysis, Institute for Environmental Studies)

Martin T. Cadwallader, Ph.D., UCLA, 1973, Associate Professor—urban, economic, quantitative analysis

Clare Stapleton Concord, Ph.D., Northwestern, 1977, Assistant Professor—applied economic, population

William M. Denevan, Ph.D., UC, Berkeley, 1963, Chairman and Professor—cultural ecology, humid tropics, historical, Latin America

Daniel F. Doeppers, Ph.D., Syracuse, 1972, Professor—urban-social, Southeast Asia, historical

Francis D. Hole, Ph.D., Wisconsin, 1943, Professor—soils, conservation, Wisconsin (also Soil Science)

James C. Knox, Ph.D., Iowa, 1970, Professor—geomorphology, paleohydrology

Joel L. Morrison, Ph.D., Wisconsin, 1968, Professor—cartography, mapping

Phillip C. Muehrcke, Ph.D., Michigan, 1969, Professor—cartography, mapping

Daniel R. Muhs, Ph.D., Colorado, 1980, Assistant Professor—soils, geomorphology

Robert C. Ostergren, Ph.D., Minnesota, 1976, Associate Professor—historical, conservation, Northern Europe, North America

Robert D. Sack, Ph.D., Minnesota, 1970, Professor—political, economic, geographic thought

Thomas R. Vale, Ph.D., UC, Berkeley, 1973, Associate Professor—biogeography, natural resources

David Ward, Ph.D., Wisconsin, 1963, Professor—historical, urban, social, North America, Europe (also Associate Dean, Graduate School)

Benjamin Wisner, Ph.D., Clark, 1977, Assistant Professor—Africa, development

David Woodward, Ph.D., Wisconsin, 1970, Professor—cartography, mapping, history of cartography

George H. Dury, Professor Emeritus

Richard Hartshorne, Professor Emeritus

Clarence W. Olmstead, Professor Emeritus

Arthur H. Robinson, Professor Emeritus

Randall D. Sale, Professor Emeritus

Henry S. Sterling, Professor Emeritus

Glenn T. Trewartha, Professor Emeritus

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Cordova Aguilar, Hildegardo. "Negative Development: The Impact of a Road on the Agricultural System of Frias, Northwestern Peru," 1982. *Mf., Univ. Microfilms.

Kirby, Russell. "Urban Growth and Economic Change in the Nineteenth-Century South: The Hinterland of Memphis, Tennessee, 1830-1900," 1982. *Mf., Univ. Microfilms.

White, Stuart. "Moments in the Narrative Landscape of Highland Peru," 1981. *Mf., Univ. Microfilms.

Master's:

Keables, Michael. "Dominant North American Mid-Tropospheric Circulation Patterns and Their Relationship to Winter Precipitation in Wisconsin, 1949-1974," 1982.

University of Wisconsin—Milwaukee

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1916 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A., M.S., Ph.D., Coordinated M.A. Degree in Geography and Library Science

GRANTED 7/1/81–6/30/82: 2 Masters, 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 25 Masters 10 Ph.D.
NOT IN RESIDENCE: 12 Masters 14 Ph.D.

CHAIRMAN: Donn K. Haglund

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Graduate Administrative Committee, Department of Geography, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin 53201
Telephone (414) 963-4866

PROGRAMS AND RESEARCH FACILITIES: Areas of faculty strength and emphasis are urban geography, climatology, Latin America, Europe, the Arctic, and the U.S.S.R. Research by staff members and students on North America, the Northern Lands, terrain morphometry, regional and systematic geomorphology, soils geography, biogeography, cartography, remote sensing, geographic information systems, settlement geography, maritime cultural geography, migration, and the geography of the humid tropics also is pursued actively.

The research programs in urban geography emphasize city-region relationships, internal structure, comparative urban geography and historical evolution of cities and metropolitan areas, and locational analysis, as well as relations of urban functions and land uses to transportation and metropolitan planning. The Department of Urban Affairs and The School of Architecture and Urban Planning as well as the Urban Research Center, strengthen geographical work in the urban field.

Training in climatology is supported by the standard courses in meteorology and hydrology. Available facilities include radiation-detecting and other meteorological equipment, a field station which includes a variety of ecosystems, and the Center for Great Lakes Studies. Research is being conducted currently on the climates of the Soviet Union, on energy and water budgets, air pollution, long range forecasting, and climatic change.

Emphases in Latin America are historical (European discovery and exploration), rural and abandoned settlements, agricultural, geomorphology, and the humid tropics. Research is assisted by a campus Center for Latin American Studies. Current research by staff and graduate students is being pursued in Argentina, Belize, Brazil, Colombia, Ecuador, Guatemala, Mexico, and Venezuela.

The Europe and U.S.S.R. program, supported by an undergraduate Certificate Program in Russian and East European Studies, involves both topical and regional analysis, with considerable emphasis on climate and population of the U.S.S.R., urban geography of West Germany, and comparative analysis of the East European and Mediterranean countries.

The Department has an official State Soils Laboratory, Cartographic and Remote Sensing Laboratory, a Map Library, and computer facilities. The American Geographical Society Collection containing 600,000 items, including many rare items, is now housed at UWM, and is open to everyone without charge.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system, fall semester ending before Christmas; summer session. About six teaching assistantships (stipend currently $5508 to $5700 for 33.3% positions); students may compete for University of Wisconsin Fellowships (stipend currently $6615). There are also opportunities for Research and Project Assistantships, nonresident tuition remission fellowships, and fellowships for minority or financially disadvantaged students (AOP). Internships in the A.G.S. collection and employment opportunities in the State Soils Laboratory are also available.

STAFF:

Karel Bayer, Ph.D., Charles University, Prague, 1960, Associate Professor—geography of ethnicity, environmental perception, historical climatology, Central Europe, Mediterranean

Barbara Borowiecki, Ph.D., Wisconsin, 1962, Professor—terrain morphometry, regional geomorphology, Eastern Europe

Michael Day, D.Phil., Oxford, 1979, Assistant Professor—geomorphology, biogeography, environmental analysis

Clinton R. Edwards, Ph.D., UC, Berkeley, 1962, Professor—historical, maritime, Latin America

Robert C. Eidt, Ph.D., UCLA, 1954, Professor—rural settlement, Latin America, soils geography

Robert Ericksen, Ph.D., Iowa, 1980, Assistant Professor—quantitative and locational analysis, geographic information systems, computer cartography

James J. Flannery, Ph.D., Wisconsin, 1956, Associate Professor—cartography, remote sensing, geography education

Donn K. Haglund, Ph.D., Pennsylvania, 1958, Associate Professor—economic, Canada, the Arctic

Lutz Holzner, Dr. rer. nat., Wurzburg, 1964, Professor—urban, Western Europe, comparative urban

Frank E. Horton, Ph.D., Northwestern, 1966, Professor and Chancellor—urban, quantitative

Paul E. Lydolph, Ph.D., Wisconsin, 1955, Professor—climate, U.S.S.R.

Harold M. Mayer, Ph.D., Chicago, 1943, Professor (also Center for Great Lakes Studies)—urban, transportation, city and metropolitan planning, North America

Harold M. Rose, Ph.D., Ohio State, 1960, Professor—population, behavior in the urban environment

Norman R. Stewart, Ph.D., UCLA, 1963, Associate Professor—pioneer settlement, Latin America

Werner A. Baum, Ph.D., Chicago, 1948, Professor Emeritus
Ruth Stoveken, M.S., Wisconsin, 1947, Assistant Professor Emerita
John C. Weaver, Ph.D., Wisconsin, 1942, Professor Emeritus

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81–6/30/82:
Ph.D.:

Goodrich, Ross. "Application of the Thornthwaite and Blaney-Criddle Methods of Estimating Irrigation Water Needs: A Problem of Scale," 1981.

Miller, David L. "Mexico's Caribbean Fishery: Recent Change and Current Issues," 1982.

Master's:

Gesell, James W. "A Distributional Analysis of Solar Radiation in Michigan's Upper Peninsula for the Period 1941-1970," 1981.

Wells, Charles L. "The Effects of Various Parameters on the Accuracy of Isopleth Maps Produced by Digital Continuous Scanning," 1982.

University of Wyoming

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A., M.S.T., M.P.

GRANTED 7/1/81–6/30/82: 4

GRADUATE STUDENTS IN RESIDENCE: 14
NOT IN RESIDENCE: 16

CHAIRMAN: Lawrence M. Ostresh, Jr.

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor Lawrence M. Ostresh, Jr., Chairman, Department of Geography, University of Wyoming, Laramie, Wyoming 82071
Telephone (307) 766–3311

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts (M.A.) and the Master of Science in Teaching (M.S.T.) programs at Wyoming emphasize four systematic specialties: cultural-political geography; physical geography; urban-economic geography; and environment and resource management. Curricula within these areas are individually tailored to the needs of each student, but include the attainment of at least two of the following geographic skills: computer cartography, quantitative methods, field methods, soils laboratory methods, air photo interpretation, and geographic analysis.

Cultural-Political Geography: This is one of the broadest Master's programs in the Department. It applies various areal viewpoints to the study of small regions, culture spread, settlement hierarchy, sequential occupance, and the perception of natural resources. In addition to their geography coursework, students are encouraged to take courses in political science, history and other social sciences.

Physical Geography: This program centers around the areas of geomorphology, archeology, and soils — especially pertaining to the Rocky Mountain area — and on paleoenvironments of the Quaternary as studied through landforms, soils, biogeography, palynology, and dendrochronology. A newly completed physical geography laboratory permits students to be trained in modern laboratory methods and techniques.

Urban-Economic Geography: Wyoming and the American West face a population explosion brought on by the development of their extensive energy resources. This provides an unparalleled opportunity for the geographic study of regional and community growth processes and the examination of the problems and promises they entail. The urban-economic program capitalizes on its accessibility to these growth related phenomena and emphasizes studies such as: The evolution of central place systems; migration patterns; locational analyses of new towns and public facilities; the land-use conversion process; and the social consequences of boomtown growth.

Environment and Resource Management: Energy related growth also provides opportunities for students to investigate a variety of critical probelms in resource management such as land use plannning for public lands, wildlife management, water resources, and the impact of development on environmental values. A combination of courses in geography, economics, law, natural science, recreation, and related fields provides an excellent interdisciplinary framework for this program.

In addition to the above geography programs, the Department offers a professional Master in Planning (M.P.) degree for students wishing to pursue training in *Community and Regional Planning*. The program is an interdisciplinary effort, involving various colleges and departments of the University. Its emphasis is on preparing individuals to function as effective regional, community, or environmental planning directors in Wyoming and other Rocky Mountain states.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:

Academic Plan—Plan A, with Thesis. Plan B with 2 papers. M.S.T. with one paper. *Admission Requirements*—Applicants evaluated on an individual basis. Undergraduate backgrounds in the social or natural sciences and the humanities accepted. Deficiencies can be remedied during the graduate program. *Financial Aid*—full-time Graduate Assistantships, paying a minimum of $5,175 plus remission of tuition fees. *Semester System* —At least 2 semesters in residence.

STAFF:

Ronald Beiswenger, Ph.D., Michigan, 1972, Associate Professor—conservation, environmental studies, world resources, biogeography

Hans Bleiker, Ph.D., M.I.T., 1972, Associate Professor—community and regional planning, problem-solving, decision-making processes

Robert H. Brown, Ph.D., Chicago, 1957, Professor—political and settlement geography, Wyoming, geographic thought

Phillip M. Fowler, Ph.D., Iowa, 1969, Associate Professor—urban, quantitative methods, economic

Lawrence M. Ostresh, Ph.D., Iowa, 1973, Associate Professor—location analysis, quantitative methods, urban-economic, computer cartography

Richard G. Reider, Ph.D., Nebraska, 1971, Associate Professor—soils, geomorphology, climatology

William E. Riebsame, Ph.D., Clark, 1981, Assistant Professor—natural resources management, climatology

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Anderson, Marcia J. "User Perception of Human Impacts in Three Backcountry Areas: A Comparative Study," 1981.

Hayter, Michael A. "Soils of the Garrett Allen Archeological Site, Carbon County, Wyoming," 1982.

Stordahl, James R. "NEPA—Its Application as a Decision Making Process," 1981.

Timbana, Kenneth M. "Indian Planning Primer," 1982.

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CANADIAN UNIVERSITIES

University of Alberta

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1957 GRADUATE PROGRAM FOUNDED: 1960

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/81–6/30/82: 10 Masters, 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 30 Masters 16 Ph.D.
NOT IN RESIDENCE: 18 Masters 4 Ph.D.

CHAIRMAN: R. Geoffrey Ironside

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Department of Geography, University of Alberta, Edmonton, Alberta, Canada T6G 2H4
Telephone (403) 432-3274

PROGRAMS AND RESEARCH FACILITIES: Individual graduate programs vary with the interests and training of the candidate. Minimum programs comprise three full-year courses for M.A./M.Sc. candidates who have completed four-year specialized degrees, and one course for Ph.D. candidates. A thesis is required of all graduate students, but there are no formal language requirements. All M.A./M.Sc. candidates must complete a course in cartography (if they have not previously done so) and a course in research methods.

In addition to access to a major library and computing center, research facilities include very generous photographic, cartographic and computing services; the University Map Collection; the Boreal Institute; research labs (geomorphology, population); and meteorological instrumentation near Edmonton.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* The teaching year extends from early September to mid-April, and is divided into two terms broken at Christmas. Some courses extend over the full period, but most are only half-year (one term).

Admission Requirements: A baccalaureate degree with at least second-class standing (65%) in the last two years of undergraduate work, and the approval of the Department. *Financial Aid:* (1) Fellowships, Scholarships and Bursaries—Supported by University, Provincial and foundation funds. Valued at up to $6800 for master's candidates, and up to $9000 for doctoral candidates. (2) Graduate Assistantships—Valued at $4600 to $6900 dependent on qualifications. Approximately 12 hours per week on departmental duties is required during the 8-month academic year. (3) Intersession Bursaries—A certain number, valued at $2308, are available to support thesis research by resident graduate students. (4) Additional assistance—Available periodically from various agencies in connection with departmental and faculty research projects.

STAFF:

John F. Bergmann, Ph.D., UCLA, 1959, Associate Professor—historical, Latin America

Michael C. Brown, Ph.D., McMaster, 1970, Associate Professor—karst geomorphology, microclimatology

Ian A. Campbell, Ph.D., Colorado, 1968, Professor—fluvial processes, arid lands

Robert B. Charlton, Ph.D., Toronto, 1970, Associate Professor—meteorology

John H. England, Ph.D., Colorado, 1974, Associate Professor—glacial, Arctic, Quaternary

Kenneth J. Fairbairn, Ph.D., Melbourne, 1968, Professor—socioeconomic studies, consumer behavior

Keith D. Hage, Ph.D., 1957, Chicago, Professor—meteorology

M. John Hodgson, Ph.D., Toronto, 1973, Associate Professor—location/allocation analysis

R. Geoffrey Ironside, Ph.D., Dunelm, 1965, Professor and Chairman—industrial location policy, rural planning

Edgar L. Jackson, Ph.D., Toronto, 1974, Associate Professor—natural hazards, perceptions and attitudes, recreation, energy

Denis B. Johnson, Ph.D., Belfast, 1969, Associate Professor—documentary film making, retail structure

G. Peter Kershaw, Ph.D., Alberta, 1982, Assistant Professor—Arctic Alpine biogeography, northern development

Leszek A. Kosinski, Ph.D., Warsaw, 1958, Professor—population, Eastern Europe

Arleigh H. Laycock, Ph.D., Minnesota, 1957, Professor—hydrology and water resources

Edward P. Lozowski, Ph.D., Toronto, 1970, Professor—meteorology

Harold J. McPherson, Ph.D., McGill, 1967, Professor—mountain geomorphology, environmental quality, natural hazards

Jean-Claude Muller, Ph.D., Kansas, 1974, Professor—analytical cartography, computer graphics

R. Bruce Rains, Ph.D., Alberta, 1969, Associate Professor—fluvial, glacial geomorphology

Erhard R. Reinelt, Ph.D., Alberta, 1964, Professor—meteorology

Neil R. M. Seifried, Ph.D., Washington, 1969, Associate Professor—industrial location, urban and regional growth

O. F. George Sitwell, Ph.D., Toronto, 1968, Associate Professor—history of geography, cultural landscape

Peter J. Smith, Ph.D., Edinburgh, 1964, Professor—political urban geography, urban planning theory and history

S. Ivan Smith, Ph.D., McGill, 1963, Associate Professor—applied climatology, tropical world, Africa, agricultural resources

William C. Wonders, Ph.D., Toronto, 1951, Professor—settlement, Northern Lands

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Oleskiw, Myron. "A Computer Simulation of Time-dependent Rime Icing on Airfoils," 1982. Mf., National Library.

Master's:

Bodden, Kenneth. "The Economic Use by Native Peoples of the Resources of the Slave River Delta," 1981. Mf., National Library.

Burt, Kirsty. "Optimizing the Tradeoff between Accuracy and Cartographic Communication for Choropleth Maps," 1982. Mf., National Library.

Dhanani, Anne. "Water Quality and Recreational Use of the River Valleys in Calgary," 1981. Mf., National Library.

King, Carolyn. "Factors Affecting the Channel Pattern of the Sturgeon River," 1982. Mf., National Library.

Mundende, Darlington. "African Immigration to Canada Since World War Two," 1982. Mf., National Library.

Nursall, Alan. "The Effects of Weather on the Frequency and Severity of Migraine Headaches in Southwestern Ontario," 1981. Mf., National Library.

Pike-Glover, Deborah. "Hydrochemical Variations Through Saturated Overburden Deposits Beneath an Irrigated Site in South Central Alberta," 1982. Mf., National Library.

Sorenson, Mark. "Density as a Planning Issue in Suburban Development: The Case of West Jasper Place," 1982. Mf., National Library.

Weaver, Sarah. "Implementation and Monitoring in Planning: The Experience of the Edmonton General Municipal Plan," 1981. Mf., National Library.

Wieler, James. "The Application of Satellite and Radar Data to Thunderstorm Research," 1981. Mf., National Library.

University of British Columbia

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1923 GRADUATE PROGRAM FOUNDED: 1947

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/81-6/30/82: 8 Masters, 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 31 Masters, 13 Ph.D.
NOT IN RESIDENCE: 3 Masters, 4 Ph.D.

HEAD: H.O. Slaymaker

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Registrar's Office, University of British Columbia, Vancouver, B.C., Canada V6T 1W5. Further information: Department of Geography, University of British Columbia, Vancouver, B.C., Canada V6T 1W5
Telephone (604) 228-2663, 3246

PROGRAMS AND RESEARCH FACILITIES: M.A., M.Sc., Ph.D. Programs:

A. Physical Geography, Emphasizing Climatological and Geomorphological Processes—

1. Climatology: heat and water balances of active surfaces; energy balances at the micro, synoptic and macro scales; urban climatology; solar energy.

2. Geomorphology: sediment transfer studies in the Coast Mountains and Interior Plateaus of B.C.; processes in alpine, sub-alpine, and arctic areas, especially slope stability and river behavior; permafrost.

3. Hydrology: field studies of runoff sources, drainage initiation, and snow hydrology; palaeohydrology.

B. Human Geography, Emphasizing Locational and Regional Analysis, and Humanistic, Behavioral and Ecological Approaches—

1. Locational and Regional Analysis: spatial organization and interaction including network studies; intraurban geography, emphasizing policy studies; regional structure, development and policy; resource use and allocation, especially the location and use of commercial energy.

2. Humanistic, Behavioral and Ecological Approaches: historical studies with a humanistic emphasis of society and land in the light of changing values, perceptions and technology; social and behavioral studies of urban groups and urban spatial structures; ecological adaptations of land-based cultures, including past and present human ecology in Middle American lowlands.

The regional emphases of the department include Canada (especially western Canada and the Arctic); Southeast and East Asia (especially China); the Soviet Union and Eastern Europe; and Latin America. Courses are available in methodology, philosophy of geography, and techniques appropriate for research in a broad area.

Interdisciplinary Programs—Participation in the Arctic and Alpine, Hydrology, Resource Science, Urban and Transportation, Asian and Slavonic and International Studies programs of the University.

Field Studies—Ongoing projects in the Western Arctic and Cordilleran regions of Canada and special projects in Latin America. Field work may be supported under grants to faculty members.

Other Facilities—In department: Extensive map and air photo holdings of B.C.; considerable calculating capacity; geomorphological and climatological laboratory; office space for graduate students. In university: second largest library in Canada; access to AMDAHL 470/V/6, Model II computing system with mapping and graphic capabilities; Graduate Student Centre.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan*—Academic year, September 1-August 31. Two terms: September 1-December 21, January 3-April 30.

Admission Requirements—Honours or major degree in geography with at least upper Second Class Standing or a grade point average of 3.0 on a 4-point scale. Applicants from related fields will be considered.

Financial Aid—Scholarships: H.R. MacMillan fellowships and U.B.C. Graduate Faculty fellowships are open to superior students. Applications are made through the Head of the Department. Canada Council, Commonwealth, Ford Foundation, C.M.H.C. and Ministry of T. Fellowships are tenable at U.B.C. Applications are made directly to these organizations. Teaching assistantships with competitive stipends are available during the eight-month academic year (September to early May). There are other assistantships for the Summer Session.

STAFF:

M. J. Bovis, Ph.D., Colorado, 1974, Assistant Professor—geomorphology, snow avalanche hazards, statistical analysis

J. D. Chapman, Ph.D., Washington, 1958, Professor—economic (manufacturing and energy), philosophy of geography

M. Church, Ph.D., British Columbia, 1971, Associate Professor—geomorphology

Richard Copley, M.A., UC, Berkeley, 1961, Senior Instructor—cultural/historical, East Asia

K. Denike, Ph.D., Pennsylvania, 1973, Assistant Professor—urban, quantitative methods, transportation

J. S. Duncan, Ph.D., Syracuse, 1978, Assistant Professor—urban/social geography, South Asia

A. L. Farley, Ph.D., Wisconsin, 1960, Professor—cartography, air photo interpretation, Pacific Northwest

Walter G. Hardwick, Ph.D., Minnesota, 1963, Professor—public aspects of urban development

R. C. Harris, Ph.D., Wisconsin, 1964, Professor—historical, Canada (leave 1982-83)

S.R. Harris, Ph.D., Queen's, 1981, Visiting Assistant Professor—urban-social, historical

John Hay, Ph.D., London, 1970, Professor—climatology (solar radiation and synoptic)

David Ley, Ph.D., Pennsylvania State, 1972, Associate Professor—urban, social, theoretical

J. Ross Mackay, Ph.D., Montreal, 1949, Research Professor Emeritus—arctic geomorphology, cartography, Canadian Western Arctic

T. G. McGee, Ph.D., Wellington (New Zealand), 1969, Professor and Director, Institute for Asian Research—Third World cities, East and Southeast Asia

Margaret E. A. North, M.A., Kansas, 1961, Senior Instructor—plant geography

Robert N. North, Ph.D., British Columbia, 1968, Associate Professor—economic development, U.S.S.R.

T. R. Oke, Ph.D., McMaster, 1967, Professor—climatology (urban and micro) (leave 1982-83)

J. Lewis Robinson, Ph.D., Clark, 1946, Professor—Canada, philosophy of geography

Marwyn Samuels, Ph.D., Washington, 1971, Associate Professor—historical, China, philosophy of geography

Alfred H. Siemens, Ph.D., Wisconsin, 1964, Associate Professor—cultural, Latin America

H. O. Slaymaker, Ph.D., Cambridge, 1968, Professor and Head—fluvial geomorphology/hydrology, British Columbia

Robert H. T. Smith, Ph.D., Australian National, 1962, Associate Vice President and Professor—economic, Third World

J. K. Stager, Ph.D., Edinburgh, 1962, Associate Dean and Professor—Canadian Arctic

D. Steyn, Ph.D., British Columbia, 1980, Assistant Professor —boundary layer meteorology

Graeme Wynn, Ph.D., Toronto, 1974, Associate Professor—historical, Canada

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Forbes, D.L. "Babbage River Delta and Lagoon: Hydrology and Sedimentology of an Arctic Estuarine System," 1981.

Knox, J.L. "Atmospheric Blocking in the Northern Hemisphere," 1981.

Master's:

Barrett, G.E. "Streamflow Generation in a Sub-Alpine Basin in the Coast Mountains of British Columbia," 1982.

McCririck, D. "Opportunity and the Workingman: A Study of Land Accessibility and the Growth of Blue Collar Suburbs in Early Vancouver," 1981.

Moffat, B.L. "A Community of Working Men: The Residential Environment of Early Nanaimo, British Columbia, 1885-1891," 1981.

Morrison, C.P. "Perception of the City: The Urban Image in Canadian Fiction," 1981.

Ruttle, C.C. "The Home and Hegemony in Everyday Life," 1982.

Torchinsky, R. "Intra-Urban Industrial Linkages," 1981.

Vance, E.C. "The Impact of the Forest Industry on Economic Development in the Central Interior of British Columbia," 1981.

Wolfe, C. "The Swan in the Desolate Heaven: The Literary Image of Place and the Ideology of Irish Nationalism," 1981.

University of Calgary

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1961 GRADUATE PROGRAM FOUNDED: 1961

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/81–6/30/82: 12 Masters, 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 19 Masters 5 Ph.D.
NOT IN RESIDENCE: 0 Masters 1 Ph.D.

HEAD: Mario B. Giovinetto

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Program, Department of Geography, The University of Calgary, Calgary, Alberta, Canada T2N 1N4
Telephone (403) 284-5584

PROGRAMS AND RESEARCH FACILITIES: Programs of graduate study are offered in most fields of Geography at the Masters and the Doctoral level and all involve course work and a dissertation. The majority of present graduate students are at the Masters level and are working in the fields of: geomorphology, biogeography, climatology, resource utilization, urban and economic studies, social and historical geography. A similar emphasis occurs at the Doctoral level where programs are available in many areas of human and physical geography including the geography of resources. Faculty and graduate studies focus primarily upon Western Canada and the Americas.

The department has well-equipped laboratories for cartography, soils, biogeography, geomorphology, and climatology (includes the University Weather Research Station) and has materials and equipment for field work, air photo interpretation and quantitative analysis (including: Tektronix graphics and Diablo hard copy terminals linked to the University's Computer Centre which houses Honeywell Multics and IBM 360-50 computers; a large digitizer linked to an IBM keypunch; and an Apple II computer with 48K of memory and floppy disk).

Geography is an active participant in the work of the Kananaskis Centre for Environmental Research (situated in the Kananaskis Valley), the Institute for Transportation Research and programs on Resources and the Environment, Urban Studies, and Latin American Studies. The University Library has good geography holdings with large collections of current periodicals, government documents, and maps.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:
Academic Plan: Year system; two four-month sessions (September—April), and an inter-session normally dedicated to thesis work (May—August).

Admission Requirements: Baccalaureate degree with an average of at least B in the work of the last two undergraduate years and recommendation of the department. Early application is advised as offers of departmental financial aid are usually made by January for September entry.

Financial Aid: Graduate research, teaching, and service assistantships range from $11,000 to $12,500 (plus remission of fees and travel allowance) depending upon the particular assistantships and year of study at Calgary.

University and Provincial awards range to $10,000 (details in the Faculty of Graduate Studies Calendar). In addition graduate students may be eligible for awards offered by The Canada Council, National Research Council, Central Mortgage and Housing Corporation, Transportation Commission, and other agencies.

STAFF:

Brenton M. Barr, Ph.D., Toronto, 1968, Professor—industrial location, regional economic development, Soviet Union, Western Canada

Lawrence D. Cordes, Ph.D., British Columbia, 1973, Associate Professor—biogeography, soils, wildland ecosystems

Michael R. C. Coulson, Ph.D., Kansas, 1966, Associate Professor—cartography, urban

Wayne K. D. Davies, Ph.D., Wales, 1964, Professor and Associate Dean, Faculty of Graduate Studies—urban, methodology, political

Mario B. Giovinetto, Ph.D., Wisconsin, 1968, Professor and Department Head—physical climatology, climatic change, glaciology

Alfonso Gonzalez, Ph.D., Texas, 1962, Professor—Latin America, socioeconomic development, population, world regions

Louis Hamill, Ph.D., Washington, 1963, Associate Professor—renewable resources, wildland environments, recreation and tourism, landscape analysis

Stuart A. Harris, Ph.D., London, 1968, Professor—geomorphology, soils, Quaternary studies

Peter D. Herrem, M.A., Minnesota, 1971, Instructor—cultural and historical geography

David R. W. Jones, Ph.D., London, 1964, Associate Professor—international trade, political, cultural and economic geography of the Tropics

Herbert G. Kariel, Ph.D., Iowa, 1962, Professor—social, diffusion, perception, mountain regions and national parks

Arthur G. Limbird, Ph.D., Michigan State, 1971, Associate Professor—soils, environmental analysis

Richard P. Momsen, Jr., Ph.D., Minnesota, 1960, Professor—Brazil, Latin America, applications of remote sensing to regional analysis

Lawrence C. Nkemdirim, Ph.D., London, 1967, Professor—climatology, hydrology

Lynn A. Rosenvall, Ph.D., UC, Berkeley, 1972, Associate Professor—historical and cultural, Southwest Pacific

Derald G. Smith, Ph.D., Johns Hopkins, 1973, Associate Professor—fluvial geomorphology, surface water hydrology, river basin planning

Nigel M. Waters, Ph.D., Western Ontario, 1977, Associate Professor—transportation, economic, analytical methods

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Karlstrom, Eric Thor. "Soils of the Glacier-Waterton Park Area," 1980.

Szplett, Elizabeth. "Corporate Quaternary Linkages and Firm Characteristics: Analysis of Selected Petroleum Administrative Functions in Calgary, Canada," 1981.

Watt, Ian. "Marketing of Agricultural Inputs in Fiji," 1981.

Master's:

Dove, Jane. "Towards a Holocene Paleoecology of the Ghost River and Water Valley Areas, Southwest Alberta," 1981.

Fudge, Stephen. "Application of Biophysical Land Classification to Shallow Gas Development in the Middle Sand Hills, Southeastern Alberta," 1981.

Gibson, Alistair F. "Problems of Inter-Island Shipping in the Solomon Islands," 1981.

Kerr, David S. "Application of Ecological Land Classification to Ungulate Habitat Analysis in the Porcupine Hills, Southwestern Alberta," 1981.

Lawson, John H. "Central Place Change in Southern Alberta: 1951-1978," 1981.

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McAteer, John R. "The Spatial Development of Rural Local Government in Alberta," 1981.

Meller, Brian D. "An Assessment of the Hydrologic Effects of Surface Coal Mining in a Mountain Watershed," 1981.

Pearce, Stephen R. "Quantitative Methodologies to Investigate Public Preference for Landscape Scenes in the Upper Kananaskis Lakes Region, Alberta," 1981.

Swales, Stephen J. "The Population, Social and Spatial Structures of a Frontier City: Winnipeg, 1881," 1982.

Traynor, Brian G. "The Impact of Surface and Subsurface Water on Streamflow and Water Quality in an Actively Mined Mountainous Watershed," 1981.

Watson, Leon Archie. "Natural and Cultural Resources Conservation in Parana, Brazil," 1981.

White, Elizabeth A. "Hydrometric and Climatic Data Analyses of Ice Break-up Events of the Red Deer River," 1981.

Carleton University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1957 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A. (Ph.D. possible with cooperating departments)

GRANTED 7/1/81-6/30/82: 9 M.A.

GRADUATE STUDENTS IN RESIDENCE: 21
NOT IN RESIDENCE: 32

CHAIRMAN: T.P. Wilkinson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Supervisor of Graduate Studies, Department of Geography, Carleton University, Colonel By Drive, Ottawa, Ontario, Canada K1S 5B6
Telephone (613) 231-2641

PROGRAMS AND RESEARCH FACILITIES: The M.A. program of the Department offers instruction and research guidance in the fields of Cultural and Historical Geography, Urban and Economic Geography, Rural and Resource Development, Cartography, Physical Geography, and Geotechnical Science. Within these areas a high level of flexibility is available in the formulation of the student's program, so long as it falls within the research interests of the department. Since effective pursuit of many geographical research problems requires a cooperative role from faculty, the student's research advisory committee may be drawn from several specialist groups from both within and outside the department.

Since the strength and scope of a graduate program is in large measure determined by the expertise and interests of the faculty members, the principal research interests of the various faculty members is elaborated below in some detail. In addition to these interests the Department has close liaison with other academic departments and with the Institute of Canadian Studies, the School of International Affairs, the Institute of Soviet and East European Studies, and the Ottawa-Carleton Centre for Geoscience Studies of the University, and with researchers in several Federal Government Departments. Study and research are supported by highly qualified staff in the fields of data processing, computer mapping, cartography, and instrument design and fabrication. Detailed descriptions are available of laboratory facilities for physical geography and geotechnical studies, cartography and computer mapping, and other services and facilities. While the main cartographic interest within the department is in computer mapping, a Cooperative Program in Cartography with Queen's University, Kingston, Ontario allows for broader exposure to this subfield. Carleton University's location in Ottawa also provides access to more than 50 specialized libraries, many of which are in Federal Government Departments. The National Library, National Archives, and Statistics Canada are among the important data sources.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The minimum requirement for the M.A. is five credits of which the thesis has a value of two. Registration may begin in the fall, winter, or summer term. The minimum *admission requirement* is normally a B.A. or B.Sc. Honours degree or its equivalent with upper second (B) standing. Other applicants may be accepted into a Qualifying Year program.

Financial Assistance: Carleton University offers graduate scholarships and assistantships in amounts comparable to those available from other Ontario universities. Other fellowships and scholarships are available from the Ontario Government, Canada Council, National Research Council, Central Mortgage and Housing Corporation, and other organizations.

FACULTY INTERESTS:

Duncan M. Anderson, M.Sc., Western Ontario, 1962, Associate Professor—land use: recreational and rural land classification and planning; energy-sensitive land use planning, landscape perception

David Bennett, Ph.D., Liverpool, 1972, Associate Professor—geography of social well-being, spatial variations in quality and equality of life; geography of income in Canada; geography and philosophy; medical geography; population studies

John Clarke, Ph.D., Western Ontario, 1970, Associate Professor—historical geography of Eastern Canada: archives and statistical aspect; rural settlement in developing areas (primarily Canada); population change, ethnic origins, land tenure systems and land speculation in Ontario; urban historical geography

Barbara E. Farrell, M.A., Carleton, 1978, Map Librarian—cartography, cartographic and geographic education

Michael F. Fox, M.A., Carleton, 1973, Assistant Professor—intra-urban location, instructional development and interpretation of remote sensing data

J. Peter Johnson, Jr., Ph.D., McGill, 1964, Professor—glacial geomorphology, low-temperature mass movement, development and history of exploration in northern regions

David B. Knight, Ph.D., Chicago, 1976, Associate Professor—the role of territory and territoriality in conflict situations; geography of the mind, and mental maps; political and religious authority and ideology and their impact on landscape; cultural-historical and political geography of developing areas; regional foci on Canada, Southern Africa, and the Southwest Pacific

Gordon C. Merrill, Ph.D., UC, Berkeley, 1957, Professor– social and cultural geography of the Caribbean area; current research: developing countries of the Third World, particularly Swaziland, Lesotho, and Botswana, with emphasis upon the role of non-governmental agencies in the development process

R.O. Ramseier, D.Sc., Laval, 1976, Adjunct Professor, Atmospheric Environment Service—active and passive microwave remote sensing of ice and oceans, material properties of ice, applied glaciology, development of operational microwave systems

D. Michael Ray, Ph.D., [illegible]nicago, 1965, Professor—system growth and spatial dynamics; urban and regional development in Canada; quantitative methods

Mark W. Rosenberg, Ph.D., London School of Economics, 1980, Assistant Professor—spatial effects of health care policy in Canada; the locational behavior of physicians, theoretical and practical problems of locating small-scale public facilities

Michael W. Smith, Ph.D., British Columbia, 1973, Associate Professor—permafrost; microclimatology; soil thermal and moisture regimes and soil properties; environmental problems of northern regions

D.R.F. Taylor, Ph.D., Edinburgh, 1966, Professor—spatial analysis, regional and rural development in the Third World countries, especially in Africa; applied aspects of geographic information systems and computer-assisted cartography; areas of special interest: regional and rural development, tourism and its role in development and education; cartography, especially applied aspects of computer-assisted cartography, and application of the TELIDON system

Gordon D. Taylor, M.A., British Columbia, 1950, Adjunct Professor, Assistant Director, Research and Analysis, Office of Tourism, Federal Government—geography of recreation and tourism, tourism marketing and development in Canada and internationally

J. Kenneth Torrance, Ph.D., Cornell, 1968, Associate Professor—chemical, mineralogical, and physical influences on the geotechnical behavior of clay soils with special reference to the post-glacial clays; modification of soil behavior; soil freezing and frost heave; vegetation establishment on mine waste areas

John E. Tunbridge, Ph.D., Bristol, 1971, Associate Professor—evolution of contemporary urban distributions from pre-industrial antecedents; historical and cultural heritage and conservation issues, particularly in the urban context

A. Iain Wallace, D.Phil., Oxford, 1971, Associate Professor—industrial geography, especially in the resource sector; regional economic development; freight transportation; the economic geography of Canada; philosophy and ideology in economic geography

Thomas P. Wilkinson, Ph.D., Newcastle upon Tyne, 1972, Associate Professor—sediment, solute and bed-load dynamics in streams; Quaternary palaeogeography and hydrology of the lower Ottawa Valley; landform morphometry; geography curriculum development

Peter J. Williams, Fil.Dr., Stockholm, 1969, Professor—properties and behavior of earth materials, especially physical and thermal properties of freezing soils; geotechnical application of such studies: highways, pipelines, etc.

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Bailie, James Gerald. "The Energy Crisis and Its Impact on Tourism in Canada," 1982.* Mf., National Library, Ottawa.

Bill, Richard Eric. "Attempts to Establish National Parks in Canada: A Case History in Labrador from 1969 to 1979," 1982.* Mf., National Library, Ottawa.

Dixon, David Alan. "Geochemical Influences on the Rheological Properties of Four Post-Glacial Marine Clays," 1982.* Mf., National Library, Ottawa.

Dushnisky, Roderick Peter. "Haying and Livestock Grazing in Riding Mountain National Park: Past Practices, Present Status, Future Considerations," 1982.* Mf., National Library, Ottawa.

Haider, Wolfgang. "Tourism in Tobago—The Case for Upgraded Guesthouses," 1982.* Mf., National Library, Ottawa.

Hossain, Mohammed Ashraf. "Regional Aspects of Social Well-Being in Canada: A Preliminary Investigation," 1981.* Mf., National Library, Ottawa.

Lee, Carol Elizabeth, "Aid for Development: The Case Study of Guyana," 1982.* Mf., National Library, Ottawa.

Mitchell, Bruce William. "The Geography of Irreligion in Canada," 1982.* Mf., National Library, Ottawa.

Rigby, Bruce Geoffrey. "Environmental Impact Assessment and the Need for Environmental Monitoring," 1982.* Mf., National Library, Ottawa.

University of Guelph

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.A., M.Sc.

GRANTED 7/1/81–6/30/82: 9

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 5

CHAIRMAN: M.R. Moss

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Graduate Committee, Department of Geography, University of Guelph, Guelph,

Ontario, Canada N1G 2W1
Telephone (519) 824-4120, ext. 2171

PROGRAMS AND RESEARCH FACILITIES: The M.A. program emphasizes rural studies. It covers a wide range of faculty interests including agricultural geography and land use, landscape evolution and settlement, resource management, and social geography and rural planning. The University Library is especially strong in nineteenth and twentieth century rural sources and the Department has an extensive agri-data bank. There is close cooperation with the personnel and resources of the Ontario Agricultural College and other related academic units.

The M.Sc. program emphasizes a physical, quantitative approach including both field and laboratory experimentation and measurement. Areas of faculty interest include slope stability and strength of landforming materials; aeolian sediment transport; periglacial processes; Quaternary landforms; coastal processes; and vegetation-geomorphic interrelationships. The department has fully equipped geomorphology labs. There is close cooperation and interaction with geology and soil science faculty in the Department of Land Resource Science and with Agricultural Engineering (Hydrology).

Students have the opportunity to combine work in Geography with the Resource Development specialization in the School of Rural Planning and Development. Two programs are available, a thesis program and a non-thesis program.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Trimester system. Admission requirements: a B average in honours Geography or equivalent. Financial aid in the form of Teaching Assistantships ($4500 per year) with additional support from research funding and scholarships. M.A. and M.Sc. programs require course work and thesis.

STAFF:

Gerald T. Bloomfield, Ph.D., Nottingham, 1964, Professor—urban-industrial, transport, New Zealand

Fredric A. Dahms, Ph.D., Auckland, 1966, Professor—geography and planning, historical geography of settlements

Robin G. Davidson-Arnott, Ph.D., Toronto, 1975, Associate Professor—geomorphology, coastal studies

Barry D. Fahey, Ph.D., Colorado, 1971, Associate Professor—periglacial geomorphology, permafrost

Anthony M. Fuller, Ph.D., Hull, 1972, Associate Professor—agricultural, rural development, Italy (also Director, Rural Development Outreach Program)

G. Patrick Gough, M.A., Wisconsin, 1960, Assistant Professor—manufacturing, transportation

Alun E. Joseph, Ph.D., McMaster, 1976, Associate Professor—delivery of services, social geography, planning

Philip D. Keddie, Ph.D., Waterloo, 1976, Associate Professor—agricultural, rural settlement, Canada

Kenneth Kelly, Ph.D., Toronto, 1968, Associate Professor—cultural, historical geography of Ontario, Latin America

Reid D. Kreutzwiser, Ph.D., Western Ontario, 1978, Associate Professor—resource management, recreation

Julius A. Mage, Ph.D., Waterloo, 1974, Associate Professor—agricultural, rural Canada

Michael R. Moss, Ph.D., Sheffield, 1973, Associate Professor—biogeography, biotic resources, environmental pollution

William G. Nickling, Ph.D., Ottawa, 1976, Associate Professor—geomorphology, aeolian sediment transport, slopes

Barry E. Smit, Ph.D., McMaster, 1977, Associate Professor—agricultural, land use analysis, rural planning

Kok-Chiung Tan, Ph.D., London, 1966, Associate Professor—political, economic development, Southeast Asia, China, the Third World

Jacqueline S. Wolfe, Ph.D., McMaster, 1976, Associate Professor—political, rural planning

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Askin, Robert. "Nearshore Erosion: An Investigation of the Factors Controlling Erosion of the Nearshore Profile in Overconsolidated Till, Grimsby, Ontario, Canada," 1981.* Mf., National Library, Ottawa.

Bantock, Peter. "Potential Spatial Accessibility to General Practitioners in Rural Areas: A Study of Wellington County," 1981.* Mf., National Library, Ottawa.

Bennett, Lorne. "The Shear Strength Characteristics of a Frozen Rock Glacier Matrix," 1981.* Mf., National Library, Ottawa.

Cocklin, Chris. "Future Urban Expansion and Implications for Agricultural Land in Ontario," 1981.* Mf., National Library, Ottawa.

Eccelstone, Miles. "A Wind Tunnel Investigation of the Influence of Some Soluble Salts on Threshold Sand Movement by Wind," 1981.* Mf., National Library, Ottawa.

Lambert, Janet. "An Investigation in Rock Glacier Relative Age, Grizzly Creek, St. Elias Mountains, Yukon," 1982.* Mf., National Library, Ottawa.

Université Laval

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1948 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: maîtrise ès arts (M.A.), doctorat ès lettres (Ph.D.)

GRANTED 7/1/81–6/30/82: 16 M.A., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 59 M.A. 23 Ph.D.
NOT IN RESIDENCE: 11 M.A., 6 Ph.D.

CHAIRMAN: André Hufty

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Directeur, Etudes de 2e et 3e cycles, Département de Géographie, Université Laval, Québec, Québec, Canada GIK 7P4
Telephone (418) 656-2512

PROGRAMS AND RESEARCH FACILITIES: *Programs:* (1) Physical Geography and Geomorphology, (2) Cultural Geography, (3) Social and Economic Geography, emphasis on North America, (4) Cartography, (5) Toponymy, and (6) Geographical Bases of Planning (Aménagement). The latter program is integrated in a university-wide multi-disciplinary program. *Research Facilities:* Well-equipped physical geography and cartographic laboratories; numerous desk calculators; digital plotter; APL terminal connected to computer center; digitizer and micro-processor; computer center consisting of IBM 360 (model 50) and IBM 370 (model 155) located adjacent to department; excellent library facilities including one of the most complete map libraries in Canada. As the university is situated in the provincial capital and historical and cultural center of French Canada, numerous government facilities and archives are available. The department also enjoys close relations with the Center for Northern Studies and Center for Regional Planning and Development.

The department also publishes a quarterly geographical review, *Cahiers de géographie de Québec*.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* Two 15 week trimesters, September to May. *Admission:* An honours degree (Canada) or equivalent degree is necessary for admittance to the M.A. program. The doctoral program requires a candidate to have a Master's degree or its equivalent. A speaking knowledge of the French language is necessary though theses may with permission be written in English or another language. *Financial Aid:* A number of teaching and research assistantships are offered.

STAFF:

Michael Allard, Ph.D., McGill, Associate Professor—geomorphology

Marcel Bélanger, D. d'U., Grenoble, Professor—cultural, geographic thought, Québec

Jacques Bernier, Ph.D., Edinburgh, Associate Professor—political, Africa

Luc Bureau, Ph.D., Minnesota, Associate Professor—rural perception, planning, cultural

Paul Bussières, D.E.S., Laval, Associate Professor—economic, transportation, geography of energy

Peter Brooke Clibbon, D. ès L., Laval, Professor and Director, Interdisciplinary Program in Regional Planning (Graduate Level)—land use, rural and recreational planning (aménagement)

Serge Courville, Ph.D., Montréal, Assistant Professor—historical, cultural

Rodolphe De Koninck, Ph.D., Singapore, Professor and Editor, Cahiers de géographie de Québec—problems of developing countries, Southeast Asia

Paul-Yves Denis, D. ès Ph. y L. (geografia), Cuyo, Argentina, Professor—Latin America, urban

Jean-Claude Dionne, D. d'U., Paris, Assistant Professor—geomorphology, Quaternary

Louise Filion, Ph.D. candidate, Laval, Instructor—biogeography

Louis-Edmond Hamelin, D.d'U., Grenoble, Professor—general geography, Canada, the North (on leave)

André Hufty, D. ès S., Liège, Professor—climatology

Francois Hulbert, Docteur de 3e cycle, Rennes, Associate Professor—regional and urban planning (aménagement), economic

Michel Jurdant, Ph.D., Cornell, Associate Professor—ecology, biogeography

Jacques Letarte, Diplôme de l'Ecole Pratique des Hautes Etudes, Paris, Professor—cartography, photo interpretation

Dean Louder, Ph.D., Washington, Professor—social, cultural, population, French America

Jean Raveneau, Docteur de 3e cycle, Strasbourg, Professor—thematic and computer mapping, population

Gilles Ritchot, D. d'U., Strasbourg, Professor—geomorphological cartography, structural geomorphology, urban forms

Benoît Robitaille, Ph.D., Laval, Assistant Professor—northern studies

Joël Rouffignat, Docteur de 3e cycle, Bordeaux, Assistant Professor—transportation and communications, agricultural geography, Third World

Maurice Saint-Yves, M.A., Laval, Professor—geographic education, regional geography, Canada

Marius Thériault, Ph.D. candidate, Laval, Instructor—climatology, quantitative methods

Germain Tremblay, D. ès S., Paris, Associate Professor—geomorphology

Louis Trotier, L. ès L., Laval, Professor—urban, vice rector of the university

Paul-Yvon Villeneuve, Ph.D., Washington, Professor—urban social, theoretical geography, quantitative methods, Canada

Eric Waddell, Ph.D., Australian National, Associate Professor—cultural, Oceania, French America

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Klein, Juan-Luis. "Région, déploiement du capital et coût du travail: contribution à l'analyse de la croissance manufacturière dans la région de Québec," 1981.

St-Laurent, Gilbert. "Problèmes de circulation à Rouyn-Noranda," 1981.

Master's:

Asselin, Maurice. "Aspects géopolitiques de la colonisation de l'Abitibi," 1982.

Blaschke, Eckhard. "La situation marginale de Chibougamau et de Matagami," 1982.

Bourget, Clermont. "Beaumont: le réaménagement d'un milieu traditionnel," 1982.

Chataignier, Hervé. "L'influence des types de circulation sur le bilan de rayonnement," 1982.

Corrales, Mercedes. "Explotación recreativa del bosque en areas con aprovechamiento forestal en la región Claxco (Tlaxcala) Chignahuapan (Puebla), Mexico," 1982.

Doukouré, Ibrahima. "Bilan pluviométrique de la saison des pluies au Sénégal," 1981.

Duncan, Michel. "Genèse géomorphologique de Kamouraska Nord-ouest," 1981.

Gaboury, Yves. "Refonte de la carte routière du Québec et processus de communication cartographique," "Élaboration d'une maquette graphique de la carte climatique du Québec," 1982.

Giguère, Jacques. "Les monopoles miniers et la Côte-nord: contribution à une géographie régionale critique," 1981.

Godreau, Michel. "Approbation foncière et dynamique spatiale en milieu périurbain: la côte de Beaupré," 1981.

Gosselin, Jean. "Élaboration d'une carte du confort climatique estival, le Québec méridional," "Élaboration et expériementation d'une grille d'évaluation pour l'analyse des cartes thématiques," 1981.

Houde, Sylvie. "L'Ile d'Orléans comme lieu symbolique," 1982.

Massicotte, Benoît. "Les autoroutes et le développement économique: le cas du secteur tertiaire des villes satellites de Montréal," 1982.

Ropivia, Marc. "Les capitales politiques des états anciennement colonisés d'Afrique et les fondements actuels de leur relocalisation," 1981.

Tremblay, Yves. "Essai cartographique des phénomènes géopolitiques," 1982.

Zapater, Eduardo. "Taxonomie, évolution, hiérarchie et métropolisation de réseau urbain de la république du Chili," 1982.

The University of Manitoba

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1951 GRADUATE PROGRAM FOUNDED: 1953

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81–6/30/82: 10 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 13 M.A. 2 Ph.D.
NOT IN RESIDENCE: 12 M.A. 6 Ph.D.

HEAD: A.J.W. Catchpole

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Graduate Studies Committee, Department of Geography, The University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2
Telephone (204) 474–9256

PROGRAMS AND RESEARCH FACILITIES: Graduate research opportunities are available in many aspects of human geography, notably in such fields as agricultural, cultural, historical, population, rural settlement, urban and industrial geographies, and in land utilization and resource management, regional development, tourism and recreation, and environmental cognition. In physical geography, research training exists mainly in climatology, geomorphology, hydrology, and associated studies of natural hazards. Most graduate research focusses on western Canada, but recent theses have included India and Africa. Studies of Winnipeg and other Manitoban settlements, especially in the North, continue to be numerous. Ample scope exists for research on recreation and other resources of Manitoba, the cultural and historical geographies of the Prairies, and the spectrum of economic activities in this region. Energy balance and hydroclimatological investigations, erosion and mass wasting studies of slopes, and fluvial geomorphology dominate research endeavours in Manitoban physical geography.

The University's IBM 370-168 computer has extensive geographic representation devices, and is available to graduate students. The Department has Olivetti-Underwood Programma 652 and 101 computers and electronic calculators. It possesses a geomorphological research laboratory, cartographic facilities, and a map library. The Dafoe, Science and Engineering libraries house approximately 900,000 volumes and possess a large range of materials pertinent to geographical research. Interdisciplinary units on campus include the Agassiz Centre for Water Studies, the Centre for Transportation Studies, and the Natural Resource Institute. Off campus, a unique facility for those wishing to pursue research in historical geography is Winnipeg's recently acquired archives of the Hudson Bay Company.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: M.A. program: 1 year of courses (in Geography and related fields) plus thesis. Admission with 'B' standing in Hons. or advanced Geography degree. Admission with 'B' in B.A. (Gen.) degree, Geography major, requires a pre-M.A. year of courses. Ph.D. program: 2 years of courses plus thesis; admission with M.A./M.Sc. Geography. Graduate student support programs in the form of University Fellowships and graduate teaching and service assistantships are available up to $7300.

STAFF:

J. S. Brierley, Ph.D., Edinburgh, 1972, Associate Professor—agricultural, Caribbean, Western Canada

W. J. Brown, Ph.D., London, 1965, Associate Professor—geomorphology, natural hazards

A. J. W. Catchpole, Ph.D., Durham, 1966, Professor and Head—climatology, climatic change

R. H. Foster, Ph.D., UC, Berkeley, 1975, Assistant Professor—urban planning, transportation, Canada and U.S.A.

B. Kaye, Ph.D., London, 1977, Assistant Professor—historical, Western Canada, cultural, Europe

Z. Mieczkowksi, Ph.D., Moscow, 1954, Associate Professor—tourism and recreation, U.S.S.R.

J. D. Milton, Ph.D., Western Australia, 1978, Assistant Professor—climatology

D. W. Moodie, Ph.D., Alberta, 1972, Professor—historical, cultural, Western Canada

W. Norton, Ph.D., McMaster, 1973, Associate Professor—historical settlement geography, spatial analysis

J. R. Rogge, Ph.D., London, 1968, Associate Professor—population, Africa, Middle East

J. I. Romanowski, Ph.D., Washington, 1970, Assistant Professor—land resource management

H. L. Sawatzky, Ph.D., UC, Berkeley, 1967, Associate Professor—land utilization and planning, recreation, Latin America

V. Smil, Ph.D., Pennsylvania State, 1972, Professor—energy and the environment, China

G. C. Smith, Ph.D., McMaster, 1974, Associate Professor—environmental cognition, quantitative methods

L. P. Stene, Ph.D., Western Ontario, 1976, Assistant Professor—geomorphology

R. C. Tiwari, Ph.D., Reading, 1964, Associate Professor—urban, India, Africa

D. Todd, Ph.D., London, 1975, Associate Professor—regional development planning, economic

PROFESSOR EMERITUS:

T. R. Weir, Ph.D., Wisconsin, 1951, Professor—Anglo America, remote sensing, cartography

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Teye, Victor Baker. "Examination of Some Factors Influencing the Development of International Tourism in Africa: A Comparative Study of Zambia and Ghana," 1982.*

Master's:

Cumberbatch, Carol Theordora. "Isolation of Factors Related to Fertility and Family Planning in Trinidad and Tobago," 1981.*

Dunlop, Susan Lynne. "An Agroclimatology of Southern Manitoba," 1981.*

Haque, Chowdhury E. "Patterns, Structure and Growth of the Labour Force in Bangladesh: A Spatial and Temporal Analysis," 1981.*

Harder, Allen Edgar. "The Underdevelopment of Nutrition and Health in Northern Manitoba: A Case Study of Modernization and Bottle Feeding," 1981.*

Holik, Henry George. "Prospects for Regional Economic Development: An Industrial Complex Analysis for Northern Manitoba," 1981.*

Krpan, John Daniel Brian. "The Characterization and Estimation of Soil Temperatures in Manitoba," 1981.*

Lytwyn, Victor Petro. "The Historical Geography of the Fur Trade of the Little North and Its Expansion into the East Winnipeg Country to 1821," 1981.*

Madison, Gerry Niles. "Reconstruction and Testing of Historical Dates of First Frost and First Snow, James Bay, Ontario," 1705-1870," 1981.*

Magne, Mary Angela. "Two Centuries of River Ice Dates in Hudson Bay Region from Historical Sources," 1981.

Munro, Hugh Leroy. "An Analysis of Use of Nest Boxes by Mountain Bluebirds in Southwestern Manitoba," 1981.

McGill University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1945 GRADUATE PROGRAM FOUNDED: 1946

DEGREES OFFERED: M.A., M.Sc., Ph.D., Diploma in Environmental Remote Sensing

GRANTED 7/1/81-6/30/82: 5 Master's, 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 17 Masters 8 Ph.D.
NOT IN RESIDENCE: 7 Masters 9 Ph.D.

CHAIRMAN: J. Brian Bird

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Affairs, Department of Geography, McGill University, 805 Sherbrooke Street West, Montreal, Quebec, Canada H3A 2K6
Telephone (514) 392-5700

PROGRAMS AND RESEARCH FACILITIES: The Department offers integrated programs of study within the following fields. The major locations of research are northern Canada, Quebec, and the Caribbean. The research and supervision interests of the department fall into the following clusters: (A) Urban Geography: emphasizing studies of the social milieu of the multi-cultural city; of the service location-allocation problem; of spatial interaction; and of the climatic environment. (B) Geography of Development: emphasizing studies around the themes of "development," "underdevelopment," and "unequal development" in their historical context and with contemporary application; centre-periphery relationships; and the cultural, ecological, economic, and political responses to such relationships. (C) Terrain Analysis: emphasizing studies of fluvial and landslide processes, and stream and slope development; of glacial and periglacial processes and landforms; of Quaternary landscape evolution; and of coastal processes. (D) Environmental Studies: emphasizing biogeography, including waste-land revegetation and plant distributions; hydrology, including water quality and snowmelt; soils, including pedogenesis and nutrient cycling; permafrost; climatology, including bio- and urban climatology; and savanna ecology. (E) Remote Sensing: emphasizing studies of the use of remote sensing techniques in the analysis of the physical landscape and patterns of human activity. (F) Recreation and Tourism: emphasizing studies of the spatial and environmental features of recreation and tourism systems at the international, regional, and local levels, with particular attention to impact on land use, carrying capacity, local societies, cultures, economies, and ecology, the development of management strategies, and recreation demand and travel behavior. (G) Cultural Ecology: emphasizing studies of cultural adaptation to urban and non-urban environments; of land use and resource utilization from the perspectives of energy flow and economic, social, and ideological behavior; the ecology of tropical agriculture; land claim problems; and northern hunting systems.

The Department has close association with the Centre for Developing-Area Studies and the Urban Planning Program, and the Centre for Northern Studies and Research.

The Geography Department is located in a new building, has excellent cartographic and remote sensing facilities, and maintains biogeography, hydrology, pedology, and geomorphology research laboratories with a full range of equipment. The Tropical Research Room and University Map and Air Photo Library are located within the same building, as is the University Computer Centre. The Department has ready access to the materials and facilities of the Centre for Northern Studies and Research and the Centre for Developing Area Studies. Many members of staff participate fully in the work of these Centres. The University maintains field stations at Mount St. Hilaire (close to McGill), Schefferville (northern Quebec), and Bellairs (Barbados). These stations can provide accommodation, facilities, and support for research in any field.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Graduate studies are administered by the Faculty of Graduate Studies and Research and a Departmental Graduate Affairs Committee; admission requirement is that of Honours degree (Canada) or equivalent specialization (U.S.)—a qualifying year is possible; Master's degree requires three resident sessions, while Ph.D. requires two years in addition to Master's degree; M.Ed. is conducted in conjunction with the Faculty of Education; all degrees (except M.Ed.) require thesis; normally 12 or more departmental assistantships (full or half-time) and research assistantships are awarded: in 1982-83, Master's $6070 and Ph.D. $6300 for 8 months, 12 hours work per week; competitive summer stipends of up to $1000; assistance is also available for fieldwork through research project funds. The Diploma Program requires one year including research paper.

STAFF:

Warwick Armstrong, Ph.D., Victoria, New Zealand, 1970, Associate Professor—resource and development, Third World (Latin America)

J. Brian Bird, M.A., Cambridge, 1949, Professor and Chairman—geomorphology, Arctic and Caribbean

J. H. Bradbury, Ph.D., Simon Fraser, 1977, Assistant Professor—economic, Canada

Michael A. Carson, Ph.D., Cambridge, 1967, Professor—engineering geomorphology, with special reference to landslides and fluvial processes

R. Norman Drummond, Ph.D., McGill, 1965, Associate Professor—cartography, Quebec

Gordon Ewing, Ph.D., McMaster, 1971, Associate Professor—urban, behavioral

Theo L. Hills, Ph.D., McGill, 1967, Professor—cultural ecology, Caribbean

W. B. Kemp, M.A., Michigan State, 1962, Auxiliary Professor—human ecology

John E. Lewis, Ph.D., Illinois, 1972, Associate Professor—bioclimatology, physiological climatology, urban climatic environments

Jan Lundgren, Ph.D., Stockholm, 1964, Associate Professor—economic development, Caribbean and Quebec

Thomas Meredith, Ph.D., Cambridge, 1979, Assistant Professor—biogeography

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T. R. Moore, Ph.D., Aberdeen, 1971, Associate Professor—soils

L. Müller-Wille, D. Phil., Westfalische Wilhelms-Universitat, 1971, Associate Professor—polar

Sherry Olson, Ph.D., Johns Hopkins, 1965, Associate Professor—social, urban

John T. Parry, Ph.D., McGill, 1965, Professor—air photo interpretation, Canada

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Granberg, Hardy. "A Field Investigation of Snowpack Ventilation," 1982.

Master's:

Beach, Harry. "Soil and Vegetation on Serpentine and Other Igneous Rocks in Southern Quebec," 1981.

Ododo, Jackson. "Unequal Development: The Niger Delta Case Study: 1900-1977," 1981.

Penrose, Janet. "The Relationship between Economic Integration and Cultural Transition: The Case of the Finnish Sami," 1982.

Smith, Janet. "Variations in Snow Quality in the Montreal Region," 1982.

Wilcock, Peter. "The Erosion and Instability of Slopes at Rupert House, James Bay, P.Q.," 1981.

McMaster University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1948 GRADUATE PROGRAM FOUNDED: 1954

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/81-6/30/82: 12 Masters, 5 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 11 Masters 18 Ph.D.
NOT IN RESIDENCE: 10 Masters 6 Ph.D.

CHAIRMAN: Michael J. Webber

FOR CATALOG AND FURTHER INFORMATION WRITE TO: The Chairman, Department of Geography, McMaster University, 1280 Main Street West, Hamilton, Ontario, Canada L8S 4K1
Telephone (416) 525-9140, ext. 4534

PROGRAMS AND RESEARCH FACILITIES: Research is conducted by the members of the staff in their areas of specialization.

The research facilities include a large map library, cartographic and calculating equipment, laboratories for work in geomorphology, microclimatology (including a field laboratory), pedology, and remote sensing, and direct access to the University Computing Centre (IBM 7040 and C.D.C. 6400).

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Admission Requirements:* A standing of Class I (A) or upper Class II (B plus) in previous academic work. *Financial Aid:* 1. National Research Council Fellowships. 2. C.M.H.C. Scholarships for urban-related research. 3. Canada Council Doctoral Fellowships. 4. University Scholarships. 5. Assistantships: Candidates for the Ph.D.: from $9,000, candidates for M.A. or M.Sc.: from $7,600 (plus negotiated increases for the next academic year). Assistantships entail 10 hours per week of teaching or research during the September-April academic year. *Academic Plan:* Year, from mid-September to early April, divided into two terms.

STAFF:

Brian T. Bunting, Ph.D., London, 1971, Professor—pedology
Andrew F. Burghardt, Ph.D., Wisconsin, 1958, Professor—political
John A. Davies, Ph.D., London, 1966, Professor—radiation climatology
Michael J. Dear, Ph.D., Pennsylvania, 1974, Associate Professor—urban planning
J. John Drake, Ph.D., McMaster, 1974, Associate Professor—hydrology, hydrochemistry
Ruth Fincher, Ph.D., Clark, 1980, Assistant Professor—urban political
Derek C. Ford, D. Phil., Oxford, 1963, Professor—karst and mountain geomorphology, Quaternary chronology
R. Louis Gentilcore, Ph.D., Maryland, 1950, Professor—historical
Frederick L. Hall, Ph.D., Chicago, 1972, Associate Professor—transportation, urban planning (joint appointment with Civil Engineering)
Philip J. Howarth, Ph.D., Glasgow, 1968, Associate Professor—remote sensing, glacial geomorphology
Leslie J. King, Ph.D., Iowa, 1960, Professor—urban growth models
Kao-Lee Liaw, Ph.D., Clark, 1973, Associate Professor—migration theory, linear models
Stephen C. Lonergan, Ph.D., Pennsylvania, 1981, Assistant Professor—energy, regional science
S. Brian McCann, Ph.D., Cambridge, 1961, Professor—coastal geomorphology and sedimentology
George Papageorgiou, Ph.D., Ohio State, 1970, Professor—urban, spatial models
Lloyd G. Reeds, Ph.D., Toronto, 1956, Professor—agricultural
Wayne R. Rouse, Ph.D., McGill, 1965, Professor—heat and water balance climatology
S. Martin Taylor, Ph.D., British Columbia, 1974, Associate Professor—behavioral
Michael J. Webber, Ph.D., Australian National, 1967, Professor and Chairman—location theory, political economy of regional development
Ming-ko Woo, Ph.D., British Columbia, 1971, Associate Professor and Acting Associate Chairman—hydrology
Harold A. Wood, Ph.D., Toronto, 1958, Professor—Latin America

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Bello, Richard. "Evapotranspiration in Greenhouses," 1982.

Miller, Thomas. "Hydrochemistry, Hydrology and Morphology of the Caves Branch Karst, Belize," 1982.

O'Kelly, Morton E. "Impacts of Multipurpose Trip-Making on Spatial Interaction and Retail Facility Size," 1981.

Uboegbulam, Timothy. "Bulk Properties of Tropospheric Aerosols as Determined by Surface Measurements," 1981.

Waylen, Peter Robert. "Analysis of Highflow in the Fraser River Catchment, British Columbia," 1982.

Master's:

Beamish, Cecil F. "Space, State and Crisis: Towards a Theory of the Public City," 1981.

Boasson, Emil. "Landsat and Airborne Radar for Land Cover/Use Mapping and Change Detection in Southern Ontario," 1981.

Gourlay, Patricia J. "Near-Surface Soil Heat and Water Fluxes in Different Permafrost Terrains; Churchill, Manitoba," 1981.

Howard, James Earl. "Modelling Solar Radiation Transmission in Cloudy Atmospheres," 1982.

Lucas, Anne. "An Analysis of Salt Marsh Communities within the Southern Gulf of St. Lawrence," 1982.

Mills, Paul W.R."Karst Development and Groundwater Flow in the Quatsino Fm., Northern Vancouver Island," 1981.

Noyes, Patricia Barnum. "Socio-Economic Relations and Urban Spatial Formation," 1982.

Snyder, Robert Jeffrey. "The Pattern and Process of Redevelopment: Kitchener, Ontario," 1982.

Spitzer, Robert. "Landsat and Seasat Data for Linement and Lithologic Mapping in Southeastern Ontario," 1981.

Memorial University of Newfoundland

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1960 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.A., M.Sc.

GRANTED 7/1/81-6/30/82: 2

GRADUATE STUDENTS IN RESIDENCE: 9
NOT IN RESIDENCE: 4

HEAD: Dr. M. Staveley

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Michael Staveley, Department of Geography, Memorial University of Newfoundland, Elizabeth Avenue, St. John's, Newfoundland, Canada A1B 3X9
Telephone (709) 737-7417/8

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography at Memorial University offers programmes leading to the M.A. and M.Sc. degrees.

Students may commence their programme in Fall, Winter, or Spring semesters, the programme of study and research normally requiring two years of full-time work. Candidates are required to take at least six one-semester graduate courses in the programme agreed upon with the Head of the Department and a supervisor appointed from the faculty. Courses in other disciplines may be taken and candidates may be required to take an examination in a foreign language should the research require it. The second year of study will normally be devoted to the writing of a thesis.

The University map library serves as a depository for Canadian Government maps and maintains an extensive collection of maps, atlases, and aerial photographs. Included within the Department are a fully equipped and professionally staffed cartographic production laboratory and photo-mechanical reproduction services. The Department is currently developing an automated mapping system. Hardware includes a modern digitizer, a small flat-bed plotter, and a terminal linked to the University VAX 11/780 computer. Access is also available to a large IBM 370 system with a Calcomp 960 drum plotter. A variety of mapping and statistical software is available. Departmental research laboratories also include facilities for palynology, soil analysis, and flume and rainfall simulator studies with a supporting technical workshop. Equipment for field research includes a departmental vehicle.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Memorial University operates on a semester system. Admission requires a Bachelor's degree with Honours or its equivalent. Applicants without this qualification may be admitted with the requirement that additional undergraduate courses be taken at the discretion of the Department and with the approval of the Committee on Graduate Studies. A certificate of proficiency in English is required if the applicant's native language is other than English or if he has not received his undergraduate instruction in English.

Limited fellowships—bursaries and grants are available from the Province, the University or the University's Institute of Social and Economic Research. The Department also provides teaching and research assistantships of varying amounts according to ability and need.

STAFF:

William H. Allderdice, Ph.D., Columbia, 1972, Associate Professor—economic, rural, Latin America

Colin E. Banfield, Ph.D., Wales, 1970, Associate Professor—climatology, air pollution

Karyn G. Cooper, M.Sc., McGill, 1978, Assistant Professor—biogeography

Dianne L. Draper, Ph.D., Waterloo, 1977, Associate Professor—resource management

Simon M. Evans, Ph.D., Calgary, 1976, Associate Professor and Co-ordinator at Corner Brook—cultural, Western Canada

Geoffrey H. Farmer, M.A., Alberta, 1967, Associate Professor—Caribbean

David Forrest, M.A., Queen's, 1981, Lecturer—cartography, computer mapping

Gordon Handcock, Ph.D., Birmingham, 1979, Associate Professor—rural settlement

Alan G. Macpherson, Ph.D., McGill, 1969, Professor—historical, Northern North Atlantic

Joyce Brown Macpherson, Ph.D., McGill, 1966, Associate Professor—geomorphology, air photo interpretation, palynology

John J. Mannion, Ph.D., Toronto, 1971, Associate Professor—rural settlement, cultural

Roberts J. Mednis, Ph.D., Boston, 1971, Assistant Professor—biogeography, conservation, subarctic

Keith S. Nicol, M.Sc., British Columbia, 1977, Assistant Professor—climatology

W. Stan. Nowak, Ph.D., London, 1966, Associate Professor—fisheries, economic oceanography, Europe

Robert J. Rogerson, Ph.D., Macquarie, 1979, Associate Professor—glacial geomorphology, hydrology, Arctic

Chesley W. Sanger, M.A., Memorial, 1973, Associate Professor—historical, urban

Maurice J. Scarlett, Ph.D., Pittsburgh, 1970, Professor—economic, transportation

Christopher Sharpe, Ph.D., Toronto, 1976, Associate Professor—urban, housing, statistical analysis

Michael Staveley, Ph.D., Alberta, 1973, Associate Professor and Head of Department—historical, population, Soviet Union

Keith J. Storey, Ph.D., Western Ontario, 1977, Associate Professor—economic, regional development

William F. Summers, Ph.D., McGill, 1957, Professor—conservation, Newfoundland

Roger W. White, Ph.D., North Carolina, 1972, Associate Professor—economic, theory, methodology

Clifford H. Wood, M.S., Idaho, 1972, Associate Professor—thematic and historical cartogaphy

William H. Yoxall, Ph.D., Dublin, 1975, Associate Professor—fluvial and experimental geomorphology

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Kodybka, Richard J. "Erosion of Palaeozoic Bedrock in the Terminal Zone of Yoho Glacier, British Columbia," 1982.

MacKinnon, Robert A. "The Growth of Commercial Agriculture around St. John's 1800-1935: A Study of Local Trade in Response to Urban Demand," 1981.

Université de Montréal

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1947

DEGREES OFFERED: M.S., Ph.D.

GRANTED 7/1/81-6/30/82: 6 M.S., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 20 M.A. 6 Ph.D.
NOT IN RESIDENCE: 33 M.A. 3 Ph.D.

CHAIRMAN: Claude Manzagol

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Committee, Department of Geography, Université de Montréal, P.B. 6128, Montréal, Québec, Canada H3C 3J7
Telephone (514) 270-4115

PROGRAMS AND RESEARCH FACILITIES: The Department offers programs of study in physical and human geography. In physical geography, they include climatology, geomorphology and biogeography; and in human geography, population, urban and rural economic, medical. Remote sensing, cartography and spatial analysis are other fields plus regional geography, especially Québec and East Asia. The Department has a spatial analysis laboratory equipped with a digitizer, a graphic display and seven terminals, and other laboratories in geomorphology, palynology and remote sensing.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Year divided into two four-month periods from September to May. Admission to the M.S. is a B.A. or equivalent. Knowledge of the French language is necessary. Assistantships are available. Students are required to complete at least three periods for the M.S. with or without a dissertation and six periods for the Ph.D. with a thesis.

STAFF:

Ludger Beauregard, Ph.D., Montréal, 1957, Professor—urban, cultural, commercial , Québec
Gilles Boileau, D. d'Université, Bordeaux, 1961, Associate Professor—rural, environment
Yves Brunet, Ph.D., Miami, 1976, Associate Professor—urban and rural, migration
Peter Foggin, Ph.D., McGill, 1971, Associate Professor—economic, health, underdevelopment
Pierre Gangloff, D. du 3e cycle, Strasbourg, 1970, Professor—geomorphology, Quaternary
James Gray, Ph.D., McGill, 1971, Associate Professor—geomorphology
Camille Laverdière, M.A., Montréal, 1954, Professor—geomorphology
Claude Manzagol, D du 3e cycle, Paris, 1974, Professor—industrial, locational

Claude Marchand, Ph.D., Toronto, 1979, Assistant Professor—urban, economic, quantitative methods

Claude Marois, Ph.D., Laval, 1980, Assistant Professor—spatial analysis, statistics, population

Pierre Richard, D. d'Etat, Montpellier, 1976, Associate Professor—biogeography

Bhawan Singh, Ph.D., McGill, 1976, Assistant Professor—climatology

Jean-Pierre Thouez, D. du 3e cycle, Grenoble, 1969, Associate Professor—medical, social

Louis Veilleaux, Ph.D., Hong Kong, 1972, Associate Professor—East Asia

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Grosmaire, [illegible]an-Louis. "L'immigration française au Québec: essai de géographie sociale," 1981.*

Lauriol, Bernard. "Géomorphologie quaternaire au sud de l'Ungava, Nouveau-Québec," 1982.*

Master's:

Auger, Bernard. "Application d'un corridor de lignes électriques à haute tension en provenance de la Baie James, Québec," 1982.*

Gauthier, Robert. "Histoire de la colonisation végétale postglaciaire des montérégiennes: deux sites du mont Saint-Bruno," 1981.*

Lareau, Jacques. "Analyse de l'expansion récente du secteur manufacturier sur la rive sud de Montréal," 1981.*

Miller, Marcel. "Les processus de distribution spatiale des populations aisées de la région métropolitaine de Montréal: la formation d'un espace réservé," 1981.*

Phillie, Pierre. "Le handicapé physique ou sensoriel et la stratégie comportementale," 1981.*

Séguin, Anne-Marie. "La localisation résidentielle et le comportement spatial des personnes âgées à Montréal," 1981.*

University of Ottawa

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1951 **GRADUATE PROGRAM FOUNDED: 1954**

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 8 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 26 M.A. 14 Ph.D.
NOT IN RESIDENCE: 11 M.A. 3 Ph.D.

CHAIRPERSON: Peter G. Johnson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Committee, Department of Geography, University of Ottawa, 165 Waller, Ottawa, Ontario, Canada K1N 6N5
Telephone (613) 231-2395/2396

PROGRAMS AND RESEARCH FACILITIES: The Geography program emphasizes 1) economic, urban, rural and social geography; 2) geomorphology, biogeography and resource management; 3) computer cartography and remote sensing; and 4) quantitative methods. There is a strong interest in applied and policy oriented work. Principal applications are in Canada, South America and South Asia.

In the M.A. program, two semesters of seminars and supervised readings are followed by an examination of the thesis proposal and thesis. The Ph.D. Geography program is composed of two major research papers prepared under supervision (one of which may be replaced by coursework), a comprehensive examination, dissertation proposal, and dissertation.

Students have access to one of the best-equipped university computer centers in Canada, including facilities for computer cartography, as well as a large map and air photo library. Ottawa furthermore offers numerous specialized federal government libraries and the facilities of embassies and consulates. The campus is located near these facilities in the city center.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Located in North America's only major bilingual University (English and French), the Department offers courses and supervision in both English and French. The bicultural character of the Department provides the benefit of exposure to both the English-North American and French schools of thought. Unilingual candidates are admitted to the program in Geography, but are expected to acquire a basic knowledge of the second official language of Canada. *Admission Requirements:* Minimum of B (second class) standing in previous academic work. Exceptions are considered. *Financial Aid:* Up to $7000 for Ph.D. students; up to $5000 for M.A. students. Funds are derived from teaching assignments, research assistantships, staff contracts and grants, and Graduate School Scholarships. Applicants seeking departmental funding are required to make applications to external scholarships, e.g., SSHRC, NRC, CMHC, OGF, etc. *Application Deadline:* To be considered for funding, applications must be received by March 15.

STAFF:

**Vincent Berdoulay, Ph.D., UC, Berkeley, 1974, Associate Professor*—social, behavioral, history of geographic thought

**David Douglas, M.A., Carleton, 1969, Assistant Professor*—computer mapping

**Hugh French, Ph.D., Southampton, 1967, Professor*—permafrost geomorphology, Arctic Canada

**Hugues Gagnon, D. d'Université, Paris I, 1976, Associate Professor*—remote sensing, soil stability, land use planning, Eastern Ontario, Western Quebec

**Marie-Anne Geurts, D. ès Sc., Louvain, 1975, Associate Professor*—geomorphology, palynology

**Peter Harrison, Ph.D., Washington, 1973, Adjunct Professor*—resource management, coastal management, regional planning and analysis, public economy

**Peter Johnson, Ph.D., Leeds, 1969, Associate Professor and Chairman*—geomorphology, Yukon Territory

Edmond Kayser, D. 3e cycle, Strasbourg, 1974, Assistant Professor—transportation and communications, Western Europe

*_Daniel Lagarec, Ph.D., Laval, 1980, Assistant Professor_—geomorphology, Quaternary paleoclimatology, periglacial geomorphology

André Langlois, D.E.A., Toulouse, 1978, Lecturer—cultural and social geography, behavioral geography

Roger Needham, M.A., Western Ontario, 1976, Lecturer—coastal management, resources, economic geography

*_Michel Phipps, D. ès Sc., Toulouse, 1969, Associate Professor_—ecology, analysis and planning of biotic resources

*_Roger Roberge, Ph.D., Clark, 1972, Associate Professor_—industrial location, geography of invention and innovation

*_Denis St-Onge, D. ès Sc., Louvain, 1962, Professor_—applied geomorphology, earth science and planning

Harishankar Srivastava, Ph.D., Florida, 1961, Professor—political, South Asia

*_Guy Steed, Ph.D., Washington, 1966, Professor_—economic, manufacturing, regional development

*_Barry Wellar, Ph.D., Northwestern, 1969, Professor_—urban and regional development, public policy analysis, transportation

*_Rolf Wesche, Ph.D., Florida, 1967, Associate Professor_—rural, economic development, South America

*Members of School of Graduate Studies

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Walecki, Julius. "Harmonized Regional Growth and Joint Ventures in the Aluminum Industry in Venezuela," 1982.

Master's:

Bigras, Steven. "Hydrological Investigation of Glacial Runoff Components and Their Separation through Hydro-Chemical Analysis," 1982.

Bourgeois, Jocelyne. "Etude palynologique dans la Vallée du Grizzly Creek (Yukon)," 1982.

Brassard, Charles. "L'exploitation du pétrole et du gaz naturel au large des côtes canadiennes: l'impact sur l'utilisation du littoral," 1982.

Carrière, Hélène. "Le renouvellement de la ressource forestière en Abitibi: problèmes et perspectives," 1981.

Lapalme, Lise-Aurore. "Le conflit entre le Canada et Terre-Neuve au sujet de la juridiction des ressources: une analyse juridico-géographique," 1982.

Onyewuenyi, Remy. "Railway Development and the Growth of Export Agriculture in Nigeria during the 1900-1950 Period," 1982.

Potvin, Monique. "La frontière et l'espace vécu chez les ontarois de la région d'Ottawa-Hull," 1981.

Roberge, Jean. "Un usage de la théorie de l'information pour l'analyse aérienne; avec étude de cas: l'inventaire biophysique du territoire de la Baie James," 1982.

Queen's University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1960 GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/81-6/30/82: 10 Masters, 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 22 Masters 13 Ph.D.
NOT IN RESIDENCE: 8 Masters 3 Ph.D.

HEAD: Brian S. Osborne

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. J.H. McCaughey, Chairman, Graduate Committee, Department of Geography, Queen's University, Kingston, Ontario, Canada K7L 3N6
Telephone (613) 547-2796

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers programs of study leading to the M.A., M.Sc., and Ph.D. degrees. The areas of interest in which graduate work is undertaken are:

1. Urban and economic geography focusing on intra-urban geography, political economy of cities and regions, regional development and public policy, diffusion and spatial interaction.
2. Geomorphic and pedologic processes with emphasis on contemporary land forming processes, watershed analysis, pedology and soil microscopy.
3. Historical geography with particular emphasis on the exploration, settlement, and urban historical geography of Canada and North America.
4. Cartography concentrating on perception and map design, the planning of national mapping programs, and historical cartography.
5. Climatology with emphasis on micro-climatology.

The Ph.D. degree is offered in the fields of Urban-Economic Geography, Historical Geography, and Geomorphic and Pedological Processes.

The libraries at Queen's University offer very good collections in the social and physical sciences. The resources available for research on Canada are exceptional. Other research facilities include the university's IBM 360-50 computer, the departmental digital minicomputing system PDP-11/VO3, a Calcomp plotter and other graphic devices. Departmental cartography laboratories house a Saltzman projector, a type-setting machine and a photogrammetry and photo interpretation laboratory. The Geomorphology and Climatology laboratories are well instrumented: soils equipment includes a magnetic separator, atomic absorption spectrophotometer, a differential thermal analyser, together with the equipment for a conventional wet chemical laboratory. Field reconnaissance and research facilities include a field vehicle, mobile field laboratory, and instrumentation equipment such as a deep-drill, a neutron probe, stream gauges, and many other items.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The Master's student entering the program with an Honours Bachelor's degree or equivalent is required to be in residence for a minimum period of one academic session of two semesters. For holders of the General Bachelor's degree or equivalent, two academic sessions in residence are required. The Master's program consists of either: (a) four semester courses and a thesis weighted as one half of the total program, or (b) six semester courses plus a thesis weighted as one quarter of the total program.

Admission to the Ph.D. program requires a Master's degree or its equivalent. Doctoral students are required to complete a minimum of four semester courses, to take a comprehensive examination, and to complete a dissertation.

Teaching assistantships in undergraduate geography courses are awarded for the eight-month academic year (two semesters) on a competitive basis. Geography graduate students are eligible to compete for university fellowships. In 1982-83, the level of support for incoming full-time graduate students, from all sources, will not be less than $6700.

FULL-TIME AND PART-TIME STAFF:

J. B. Cannon, Ph.D., Washington, 1969, Assistant Professor—economic, regional development

H. W. Castner, Ph.D., Wisconsin, 1964, Associate Professor—cartography, map design, thematic mapping, historical cartography of Russia

R. Gilbert, Ph.D., British Columbia, 1974, Associate Professor—geomorphology, physical limnology and oceanography

P. G. Goheen Ph.D., Chicago, 1970, Associate Professor—urban, historical

J. Holmes, Ph.D., Ohio State, 1974, Assistant Professor—political economy of cities and regions

W. G. Lovell, Ph.D., Edmonton, Alberta, 1980, Killam Research Associateship—historical, cultural, Latin America

S. Mackenzie, Ph.D., Sussex (pending), Visiting Assistant Professor—urban, social, women's studies

J. H. McCaughey, Ph.D., McMaster, 1972, Associate Professor—microclimatology

G. McGrath, M.A., Cambridge, 196[illegible], Associate Professor—cartography, air photogrammetry and interpretation, surveying, Africa

E. G. Moore, Ph.D., Queensland, 19[illegible]6, Professor—urban, behavioral, residential location and public policy

A. Nash, Ph.D., Cambridge (pending), Post-doctoral Fellow—historical demography.

B. S. Osborne, Ph.D., Southampton, 1967, Professor—human, historical, cultural

J. B. Riddell, Ph.D., Pennsylvania State, 1969, Associate Professor—Africa, development, spatial interaction

R. I. Ruggles, Ph.D., London, 1958, Professor—historical, historical cartography, U.S.S.R.

G. K. Rutherford, Ph.D., Vollebekk, Norway, 1959, Professor—soils, agricultural, land systems analysis, tropical areas

J. Shaw, Ph.D., Reading, 1969, Professor—glacial geomor[illegible]gy, sedimentology

R. Stock, Ph.D., Liverpool, 1981, Assistant Professor—regional development, medical geography, Africa

A. M. Taylor, D.Phil., Oxford, 1955, Professor Emeritus—political, technology and environment, historical

R. R. Tinline, Ph.D., Bristol, 1973, Associate Professor—medical geography, information systems, diffusion

W. J. Vreeken, Ph.D., Iowa State, 1972, Associate Professor—soils, water resources

M. H. Yeates, Ph.D., Northwestern, 1963, Professor and Dean of the School of Graduate Studies—urban, economic, regional analysis

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Master's:

Dimma, Dianne. "The Physical, Chemical and Mineralogical Properties of Tailings in the Sudbury Area," 1981. Mf., National Library, Ottawa.

Fentum, Carina Ann. "Telecommunications and the Office: Change in the Organization and Spatial Configuration of Offices," 1981. Mf., National Library, Ottawa.

Forrest, David. "The Design and Perception of Non-numerical Point Symbols," 1981. Mf., National Library, Ottawa.

Hazlett, Paul. "The Physical, Chemical and Geomorphic Properties of Soils Devastated by Smelting Activities at Coniston, Ontario," 1982. Mf., National Library, Ottawa.

Joseph, Helen. "A Study of Heavy Metal Transport in Irrigation Return Flows of Southern Alberta," 1982. Mf., National Library, Ottawa.

Kurzyna, Teresa. "Problems of Water Circulation and Exchange in Arctic Fiords," 1981. Mf., National Library, Ottawa.

Publicover, Mark. "The Development and Use of Micro-Data Systems in Local Planning Applications," 1981. Mf., National Library, Ottawa.

Sanderson, Bruce. "Site Value vs. Improved Value Taxation and Their Effects on CBD Development," 1982. Mf., National Library, Ottawa.

Sommerville, Margaret Barr. "The Child's Perception of the Figure-Ground Relationship on Thematic Mapping," 1981. Mf., National Library, Ottawa.

Tevera, Daniel. "The Making of a Colonial Space Economy: Labour Reserves and Capitalist Cores in Zimbabwe, 1890-1945," 1981. Mf., National Library, Ottawa.

University of Regina

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1972

DEGREES OFFERED: M.A., M.Sc.

GRANTED 7/1/81-6/30/82: 1

GRADUATE STUDENTS IN RESIDENCE: 9
NOT IN RESIDENCE: 5

HEAD: Alexander H. Paul

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Head, Department of Geography, University of Regina, Regina, Saskatchewan, Canada S4S 0A2 Telephone (306) 584–4223

PROGRAMS AND RESEARCH FACILITIES: The M.A. and M.Sc. programmes include lectures, seminars, intensive field work and dissertation. The originality of the dissertation is a prerequisite for the degree. Though the programmes are individualized, students are encouraged to do interdisciplinary work. The systematic fields emphasized are urban, rural, climatology, economic, and resources, especially water and recreation. Adequate facilities for cartography, air photo interpretation, computer analysis, and graphics are available.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: For details write to the Head.

STAFF:

Edmund H. Dale, Ph.D., Alberta, Professor—political, political-urban, Commonwealth Caribbean

Alexander H. Paul, Ph.D., Alberta, Associate Professor and Head—climatology, recreation, water resources, Western Canada

Abul H. Sahir, Ph.D., Minnesota, Associate Professor—cultural, geographic thought, rural

Hans G. Schlichtmann, Ph.D., Tubingen, Associate Professor—thematic cartography, cultural, Western Europe

Adrian A. Seaborne, Ph.D., Swansea, Assistant Professor—economic, Canada

Paul Simpson-Housley, Ph.D., Otago, Assistant Professor—cultural, perception, resources,methodology

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Larrain, N. Patricio. "Port Geography of Thunder Bay: A Commodity Flow Analysis (1961–79)," 1981.

University of Saskatchewan

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1960 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/81–6/30/82: 1 M.A., 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 7 Masters 2 Ph.D.
NOT IN RESIDENCE: 2 Masters 1 Ph.D.

HEAD: R. Keith Semple

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. A. K. Chakravarti, Chairman, Graduate Studies Committee, Department of Geography, University of Saskatchewan, Saskatoon, Saskatchewan, Canada S7N 0W0
Telephone (306) 343-2252

PROGRAMS AND RESEARCH FACILITIES: The department focuses graduate training and research in the areas of regional development and environmental studies. Research is encouraged in both human and physical geography with emphasis on economic, urban, cultural, biogeographical, climatological, geomorphological and hydrological problems. Thesis and dissertation topics traditionally have been formulated within a northern Canada or Prairie setting.

Programs in geography may be coordinated with programs in other departments and colleges. There is close contact and special cooperation with the Institute for Northern Studies which conducts summer field training in the arctic at the Rankin Inlet research station.

The Department of Geography is housed in the Arts Building and is fortunate to have lecture and seminar rooms, cartographic and physical laboratories as well as faculty and student offices located together in one unit. The technical facilities for research available are: IBM 370 and DEC-2060 computers with statistical packages and programs for research in social and physical sciences, a modern cartographic laboratory with complete photomechanical processing, a map and air photo library and an up-to-date collection of major journals in geography and in related fields.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* The academic session (divided into two terms) extends from mid-September until early April, leaving spring and summer free for conducting field work or writing research papers or the thesis.

Admission Requirements: Graduate College admission requires the equivalent of the University of Saskatchewan four year degree of B.A. or B.Sc. with a minimum of second class or B standing. Students with less than these prerequisites may be admitted on a probationary basis with department and College permission.

Financial Aid: Financial support for directed work in geography is available both during academic session and summer period. Graduate Scholarships and Teaching Fellowships may range from $4,950 to $9,120 for a year. Departmental assistantships and individual research project assistantships of varying amounts are also available during the academic year and for the Summer Session.

STAFF:

O. William Archibold, Ph.D., Simon Fraser, 1975, Associate Professor—biogeography, northern environments, quantitative

William Barr, M.Sc., McGill, 1965, Professor—Arctic and Pleistocene geomorphology, Soviet arctic

Robert M. Bone, Ph.D., Nebraska, 1962, Professor—population, northern development, Soviet Union

Aninda K. Chakravarti, Ph.D., Wisconsin, 1967, Professor and Graduate Chairman—climatology, agricultural, South Asia

Ka Iu Fung, Ph.D., London, 1979, Associate Professor—urban, cartography, remote sensing, China

Milford B. Green, Ph.D., Ohio State, 1980, Assistant Professor—economic, quantitative

John G. McConnell, M.A., Toronto, 1965, Associate Professor—historical, northern development, North America

John A. Menary, Ph.D. (pending), Oklahoma, Assistant Professor—urban and regional planning, social policy

Janet E. Mersey, Ph.D. (pending), Wisconsin, Lecturer—cartography, remote sensing

Alan G. Phipps, Ph.D., Iowa, 1978, Assistant Professor—economic, urban and regional planning

Ronald Rees, M.A., Toronto, 1960, Associate Professor—landscape, perception, cultural, historical Europe

J. Howard Richards, Ph.D., Toronto, 1954, Professor—land use, regional development and planning

R. Keith Semple, Ph.D., Ohio State, 1969, Professor and Head—quantitative analysis, development, locational analysis

Peter Waylen, Ph.D., McMaster, 1981, Assistant Professor—hydrology, geomorphology

Michael R. Wilson, Ph.D., Oregon, 1973, Associate Professor—biogeography, anthropogeography, Latin America

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Bilokreli, Bryan G.N. "A Comparison Between a Spatially Ideal Campus and the University of Saskatchewan," 1981.

Université de Sherbrooke

DEPARTEMENT DE GEOGRAPHIE

DATE FOUNDED: 1963 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.Sc.

GRANTED 1/1/81-1/1/82: 7

GRADUATE STUDENTS IN RESIDENCE: 20
NOT IN RESIDENCE: 29

CHAIRMAN: Jean-Marie Dubois

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Département de géographie, Faculté des Arts, Université de Sherbrooke, 1500 boul. Université, Sherbrooke, Québec, Canada J1K 2R1
Telephone (819) 565-4521

PROGRAMS AND RESEARCH FACILITIES: Specialization in Spatial Organization in Regional Planning, Small Towns and Communities in a Rural Environment, Remote Sensing and Cartography, Quarternary Studies, and Applied Geography. The Department has a physical geography laboratory and a remote sensing field laboratory. A cooperative research program is operated in conjunction with the Lennoxville Experimental Farm of Agriculture Canada.

The cartography laboratory is well equipped and includes an EAI Pacer 100 Computer with tracing table and a Bendix digitizer system. In addition the University possesses an IBM 360-65. The Department works in close association with the Regional Planning Research Institute of the University of Sherbrooke.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Admission Requirements:* An Honor Degree (Canada) or equivalent degree (U.S.A.). Speaking knowledge of French. *Academic Plan:* Year divided into semesters from September to May. *Financial Aid:* 15 assistantships of $2000 available each year.

STAFF:

Jean-Jacques Boisvert, D.d'U., Grenoble, 1954, Associate Professor—climatology

Ferdinand Bonn, Ph.D. (geography), Strasbourg, 1975, Associate Professor—geopedology, biogeography, remote sensing

Jean Castonguay, M.A. (geography), Sherbrooke, 1974, Assistant Professor—computer mapping, computer techniques

Roch Choquette, licence d'enseignement secondaire, M.A. (geography), Sherbrooke, 1970, Associate Professor—teaching of geography

Jean-Marie Dubois, Ph.D. (geography), Ottawa, 1980, Director of the Department of Geography, Associate Professor—air photo interpretation, Quaternary geomorphology, coastal geomorphology

Robert Gagnon, Ph.D. (geography), Aix, 1971, Professor—economic, rural, quantitative

Q.H.J. Gwyn, Ph.D. (geology), Western Ontario, 1971, Associate Professor—Quaternary geology and geomorphology, sedimentology and stratigraphy

Bernard Lauriol, Ph.D. (geography), Montreal, 1981, Assistant Professor—Quaternary geomorphology, karst geomorphology, coastal geomorphology

Denis Morin, Ph.D. (geography), Liège, 1978, Assistant Professor—social, urban, population

Roger Nadeau, Ph.D. (geography), Nice, 1975, Associate Professor—tourism, recreation, regional (Québec)

Romain Paquette, Ph.D., McGill, 1968, Professor—behavioral, geography of underdeveloped countries, geography of the Caribbean area. human ecology

André Poulin, M.A. (geography), Montreal, 1969, Associate Professor—geomorphology, land use, man's impact on the environment

Marcel Pouliot, M.A. (geography), Laval, 1970, Associate Professor—transportation, communication, public policies, population

Léo Provencher, M.Sc. (geography), Sherbrooke, 1979, Lecturer—air photo interpretation, map interpretation

Michel Rheault, M.A. (geography), Ottawa, 1973, Assistant Professor—thematic and statical cartography

Jean-Marie Roy, D. d'U., Grenoble, 1951, Professor—history of geographical thought, political, regional (Québec, Canada, United States)

Oleg Stanek, Ph.D. (regional and urban planning), Brno, Czechoslovakia, 1952, M.A. (economics), Prague, 1949, Professor—regional and urban planning, economics, geography of socialist countries

TITLES OF THESES COMPLETED 1/1/81–1/1/82:

Master's:

Bernier, Monique. "Cartographie de l'inertie thermique par télédétection, application à l'humidité des sols," 1981.

Brochu, Richard. "Télédétection des échanges d'énergie au niveau du sol et de la végétation," 1981.

Desmarais, Guy. "Les environnements quaternaires et l'évolution post-glaciaire du bassin de la rivière Matamek, Côte Nord du Saint-Laurent," 1981.

Guernon-Gauthier, Louise. "La géographie du crime: étude appliquée à la ville de Sherbrooke," 1981.

Lebeau, Mario. "Essai d'application de l'analyse coûts-bénéfices à la localisation d'un centre d'achats régional," 1981.

Nolin, André. "Sédimentologie et géomorphologie associées au lac glaciaire Algonquin, près du site paléoindien Fisher, Stagner, Ontario," 1981.

Ricard, Claude. "Etude de l'impact d'un centre commercial péri-urbain sur le fonctionnement du centre-ville: Shawinigan," 1981.

Simon Fraser University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1965 GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/81–6/30/82: 1 M.A., 1 M.Sc., 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 10 M.A. 6 Ph.D.
NOT IN RESIDENCE: 6 M.A. 5 Ph.D.

CHAIRMAN: E. J. Hickin

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Secretary, Graduate Studies Committee, Department of Geography, Simon Fraser University, Burnaby, British Columbia, Canada V5A 1S6
Telephone (604) 291-3322

PROGRAMS AND RESEARCH FACILITIES: Students may specialize in the three basic branches of geography: cultural, economic, and physical, though considerable intersub-disciplinary work is also pursued. The department takes a special interest in developing theoretical and conceptual frameworks in the systematic fields of geography. Current research, in addition to work in the immediate area, is being undertaken in the United Kingdom, the U.S., and in the Canadian North.

Facilities for advanced work include well-equipped cartography, geomorphology, biogeography, and climatology laboratories. In addition the University possesses an IBM 370/155 computer, with Calcomp and Tectronics plotters.

Thesis work is currently being undertaken in the following areas: Plant Geography, Urban Social Geography, Resource Analysis, Meandering Rivers, Computer Cartography, etc.

M.A. Program consists of either 30 semester credits of course work, or 20 credits and a thesis (10 credits). Students must give evidence of their research ability by the satisfactory completion *either* of a thesis (counting for 10 credits) *or* of two extended essays based on assignments carried out as part of the work in graduate courses.

M.Sc. Program. Students must give evidence of their research ability by the satisfactory completion of a thesis and 20 hours of course work.

Ph.D. Program consists of a basically unstructured program, successful passing of a set of qualifying examinations and the completion of a dissertation.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Semester System.* Entrance to degree program possible on January 1st, May 1st or September 1st each year. Last dates for application to the semester selected are: September 30, January 31, and March 15 respectively.

M.A. Program. To gain admission student applicants must present evidence that they are adequately prepared in terms of the extent of their undergraduate training and the level of their scholarly ability. Normally, admission is granted to students who have achieved at least a "good" second class standing in their undergraduate work ("B", "B+", "A"). Students from United Kingdom universities, generally, will be accepted only if they have achieved a "first" or "upper second". In exceptional cases students may be admitted who are able to present alternative evidence of their academic ability.

M.Sc. Program. Students should normally hold a B.Sc. degree, or equivalent, in an honors program with at least a good second class standing (3.0 G.P.A.) in Geography or a related discipline; where the candidate's first degree is not in Geography, he/she should have at least 12 semester hours or the equivalent in upper division Geography courses.

Students with a general degree must have 30 semester hours or the equivalent in upper division Geography courses.

Ph.D. Program. Admission is only granted when the department has evidence that a candidate is able both to complete formal course work at the most advanced level and to produce a satisfactory dissertation.

Other requirements. In both cases the student is expected to show or acquire competence in statistical techniques, problems and principles of geographic methodology, and, in addition, a student may be directed to acquire an adequate knowledge of a language other than English which would be relevant to his/her studies.

Financial aid. The department can normally offer a total of four one-semester, part-time teaching assistantships to M.A. and M.Sc. candidates and eight assistantships to doctoral candidates, at the current salary of $2945.00 and $3490.00 per semester respectively (that is, $5890.00 per two semesters for M.A.'s and M.Sc.'s and $6980.00 per two semesters for Ph.D. candidates). Continuation of assistantships beyond one semester depends upon satisfactory teaching performance. In addition, once during a program of study, a stipend at an M.A./M.Sc. rate of $2400 and at at Ph.D. rate of $2990 is usually available after three semesters of graduate work. Other forms of support may be available from time to time on specific departmental research projects.

STAFF:

W.G. Bailey, Ph.D., McMaster, 1977, Assistant Professor—climatology, agricultural micro-climatology

M.L. Barker, Ph.D., Toronto, 1972, Associate Professor—resources management, water resources

R. C. Brown, Ph.D., Michigan State, 1967, Associate Professor and Dean of Arts—agricultural geography, resources development

C. B. Crampton, Ph.D., Bristol, 1956, Professor—geology, pedology, ecology

F.F. Cunningham, Dip. Ed., Durham, F.R.G.S., Professor Emeritus—geomorphology, Latin America, relations between landscape science and landscape art

M. E. Eliot Hurst, Ph.D., Durham, 1966, Professor—Marxist and socialist approaches to human geography, aesthetics, culture and ideology

L. J. Evenden, Ph.D., Edinburgh, 1970, Associate Professor—urban and social geography

E. M. Gibson, Ph.D., British Columbia, 1970, Associate Professor—human geography of modern and post-modern societies, landscape style, Canada

R. Hayter, Ph.D., Washington, 1973, Associate Professor—regional development, manufacturing

E. J. Hickin, Ph.D., Sydney, 1971, Associate Professor and Chairman—geomorphology, quantitative and field methods

R. B. Horsfall, Ph.D., Johns Hopkins, 1969, Assistant Professor—social geography, environmental psychology

I. Hutchinson, Ph.D., Simon Fraser, 1977, Assistant Professor—biogeography

P. M. Koroscil, Ph.D., Michigan, 1970, Associate Professor—cultural, historical, Canada

A. MacPherson, M.A., Edinburgh, 1950, Professor—cultural geography, Western Europe, methodology

J. T. Pierce, Ph.D., London School of Economics, 1976, Assistant Professor—economic and rural geography, research methodology

G. A. Rheumer, Ph.D., Illinois, 1953, Associate Professor—historical, British Columbia

M. C. Roberts, Ph.D., Iowa, 1966, Professor—fluvial geomorphology, field methods

R. B. Sagar, M.Sc., McGill, 1959, Associate Professor—climatology, glaciology

P. L. Wagner, Ph.D., UC, Berkeley, 1953, Professor—cultural geography

J. W. Wilson, M.Sc., MIT, 1947, M.R.P., North Carolina, 1951, Professor—urban and regional planning

S. T. Wong, Ph.D., Chicago, 1968, Associate Professor—resources management, quantitative methods

PART-TIME STAFF (half-time in other departments):

J.C. Day, Ph.D., Chicago, 1970, Professor and Director of MRM Program—resource and environmental management, water management

T.I. Gunton, Ph.D., British Columbia, 1981, Assistant Professor—urban and regional planning, resources management

T.K. Poiker, D. Phil., Heidelberg, 1966, Professor—economic, quantitative, computer cartography

A.C.B. Roberts, M.A., Waterloo, 1977, Instructor—remote sensing, cultural-historical

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Khan, Amanat. "Manufacturing Diversification in the Vancouver Metropolitan Area," 1981.* Mf., Univ. Microfilms.

Smith, Larry. "An Island Biogeographic Study of Subalpine Forest Island," 1981.* Mf., Univ. Microfilms.

University of Toronto

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1935

DEGREES OFFERED: M.A., M.Sc., Ph.D. Geography; M.Sc. Planning; M.A. Teaching

GRANTED 7/1/81-6/30/82: 11 Masters, 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 37 Masters 22 Ph.D.
NOT IN RESIDENCE: 2 Masters 4 Ph.D.

CHAIRMAN: John N.H. Britton

FOR CATALOG AND FURTHER INFORMATION WRITE TO: The Chairman, Department of Geography, University of Toronto, Toronto, Ontario, Canada M5S 1A1
Telephone (416) 978-3377

PROGRAMS AND RESEARCH FACILITIES: The Geography M.A. and M.Sc. programs normally take a year, and comprise graduate courses and either a thesis or a research paper. A collaborative Master's program in environmental studies provides the additional opportunity to take core courses and undertake an internship outside the Geography Department. The Ph.D. is a research degree requiring mainly the preparation of a doctoral thesis. This program requires at least two years in residence after the M.A.

The department is prepared to supervise graduate research in climatology, geomorphology, pedology and land management, resource management and environmental hazards, cultural and social geography, historical geography, philosophy and history of geography, industrial geography, regional development, transportation analysis, quantitative analysis, and urban geography. The department conducts and provides for research on Canada, the United States and other areas where members of staff have active research interests, particularly Latin America, the U.S.S.R., Western and Central Europe, Africa, and East Asia.

A collaborative degree with the Faculty of Education enables teachers to obtain the M.A. (Teaching) degree on a part-time basis.

The department is also the home of the Master's degree in Planning, a two-year professional degree that is taught mainly by planners and geographers with planning interests. For information about any of the degree programs write the department.

The University library, with some three and a half million volumes, and special libraries near the campus comprise the largest collection of books and documents in Canada. Computing facilities available on campus include an IBM S/360/65, S/370-165, and DEC System 1060. Computer research facility provides specialized services, i.e., graphics, real-time computing, and data acquisition.

Departmental facilities include cartographic laboratories, laboratories and a field station for climatology and geomorphology, computer programming assistance, computer graphics laboratory, and research rooms for graduate students.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan*—Year system, with entrance in September. *Admission Requirements*—Minimum requirement is a bachelor's degree from a recognized university within the last five years with at least upper second class standing or its equivalent. Exceptions permitted in unusual circumstances. *Financial Aid*—Teaching and Research Assistantships carrying stipends of $4400 to $5000 are available and involve not more than ten hours work per week. Fellowships (University of Toronto, Social Sciences and Humanities Council of Canada, Central Mortgage and Housing Corporation, Natural Sciences and Engineering Research Council Canada, Transportation Development Agency, etc.) $5100 to $9350 requiring no services. Summer employment in department often available.

GRADUATE FACULTY:

Howard F. Andrews, D.Phil., Sussex, 1970, Associate Professor—theoretical social geography

Alan M. Baker, Ph.D., Chicago, 1976, Associate Professor—urban cognition, simulation, computer cartography

Hans Blumenfeld, M.A., Darmstadt, 1921, Professor—transportation planning, metropolitan development

Larry S. Bourne, Ph.D., Chicago, 1966, Professor and Director, Centre for Urban and Community Studies—urban systems, urban spatial structure, housing

John N. H. Britton, Ph.D., London, 1966, Professor and Chairman—industrial development and technological policy

Rorke Bryan, Ph.D., Sheffield, 1967, Professor—experimental geomorphology, soil conservation, arid lands development

Michael Bunce, Ph.D., Sheffield, 1970, Associate Professor—agricultural change in urban regions, rural settlement, rural planning

Ian Burton, Ph.D., Chicago, 1962, Professor and Director of the Institute for Environmental Studies—environmental hazards

J. Barry Cullingworth, B.Sc., London, 1955, Professor—land policy, housing policy, social and physical planning

Leslie Curry, Ph.D., New Zealand, 1959, Professor—theoretical economic geography

Anthony M. Davis, Ph.D., Wisconsin, 1970, Associate Professor—biogeography, palynology/paleoecology

William G. Dean, Ph.D., McGill, 1959, Professor—arctic resources, Pleistocene geography, historical atlas of Canada

Neil C. Field, Ph.D., Washington, 1956, Professor—demographic analysis, U.S.S.R.

Jock H. Galloway, Ph.D., London, 1965, Professor—Latin America, historical geography of Brazil

Brian Greenwood, Ph.D., Bristol, 1970, Professor—coastal geomorphology, nearshore hydrodynamics and sedimentation

Angelo P. Grima, Ph.D., Toronto, 1970, Associate Professor—environmental management, public participation, energy policy

F. Kenneth Hare, Ph.D., Montreal, 1950, Professor—climatic and environmental change, extreme climates, climatic influences on economy

John R. Hitchcock, Ph.D., North Carolina, 1969, Associate Professor—neighborhood planning

Reiner Jaakson, Ph.D., Waterloo, 1972, Professor—recreation, survey methods, lake planning

Alan V. Jopling, Ph.D., Harvard, 1961, Professor—geomorphology, sedimentology, Quaternary studies

Donald Kerr, Ph.D., Toronto, 1950, Professor—historical geography of Canada, economic and urban change

James T. Lemon, Ph.D., Wisconsin, 1964, Professor—historical urban geography, colonial America, social geography

Stanley M. Makuch, LL.M., Harvard, 1972, Associate Professor—planning law

Joseph A. May, Ph.D., Toronto, 1968, Associate Professor—history and philosophy of geography, population geography

Thomas F. McIlwraith, Ph.D., Wisconsin, 1973, Associate Professor—Ontario landscape, nineteenth-century technology and transport

Aidan McQuillan, Ph.D., Wisconsin, 1975, Associate Professor—historical geography of rural North America

John Miron, Ph.D., Toronto, 1974, Associate Professor—household formation, migration, housing demand, location theory

D. Scott Munro, Ph.D., McMaster, 1975, Associate Professor—microclimatology, wetland and glacial basin, hydroclimatology

Edward C. Relph, Ph.D., Toronto, 1973, Associate Professor—landscapes

Shoukry T. Roweis, Ph.D., MIT, 1973, Associate Professor—urban planning and political processes

James W. Simmons, Ph.D., Chicago, 1964, Professor—Canada's urban system: growth and policy

Jacob Spelt, Ph.D., Utrecht, 1955, Professor—historical urban geography

J. J. van der Eyk, Ph.D., Wageningen, 1957, Professor—soil formation, land management, remote sensing

Alan Waterhouse, Ph.D., Berlin, 1968, Professor—urban design

Rodney R. White, Ph.D., Bristol, 1971, Associate Professor—Third World economic development, infrastructure planning

Joseph B. R. Whitney, Ph.D., Chicago, 1969, Professor and Graduate Coordinator—environmental impact assessment

Anne V. Whyte, Ph.D., Johns Hopkins, 1972, Associate Professor—environmental perception, environmental and social aspects of Third World development

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Lea, Anthony Carson. "Towards a Theory of the Public Space Economy," 1981.

Mittler, Peter R. "Sediment Flux and Equilibrium in a Barred Nearshore, Kouchibouguac Bay, New Brunswick, Canada," 1981.

Master's:

Badyk, Michael A. "Testing a Predictive Model for Mammal Population Densities on Freshwater Islands," 1981.

Bauer, Bernard Oswald. "Modelling Water Redistribution in the Unsaturated Zone," 1981.

Charleton, Christopher J. "An Examination of Environmental Degradation in the United Republic of Tanzania Attributable to U.S. and Swedish Bilateral Assistance Policies and Programmes," 1982.

Deschenes, Claudette Helene. "An Evaluation Framework for Regional Development Programmes," 1981.

Ennamorato, Michael. "The Post-War Suburbs and the Components of Chance," 1982.

Fram, Mark Warren. "A Geography of Facades: Architectural Expressions of Urban Change in Toronto's Commercial Streets," 1982.

Harrison, Michael R. "The Perception of Weather and Climatic Change in Southern Ontario, Canada," 1981.

Mackie, Kathleen Anne. "An Exploration of the Idea of Home in Human Geography," 1981.

Morris, Daniel. "Risk Assessment and the Transportation of Hazardous Materials by Truck in Ontario," 1981.

Rudolph, Mark S. "Opportunities for the Use of Biomass as a Source of Energy in the Industrial, Commercial, and Institutional Sectors in Canada," 1981.

Shaw, Alison. "Manufacturing in Toronto and the Innovation Process," 1981.

University of Victoria

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1949 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/81-6/30/82: 2 M.A., 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 14 M.A., 1 Ph.D.
NOT IN RESIDENCE: 15 M.A., 2 Ph.D.

CHAIRMAN: W. R. Derrick Sewell

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Mr. L. T. Ghobrial, Faculty of Graduate Studies, University of Victoria, Victoria, British Columbia, Canada V8W 2Y2
Telephone (604) 721-7975

PROGRAMS AND RESEARCH FACILITIES: The Geography Department concentrates its major efforts in four fields. North America and the Pacific Region are the main regional foci while urban economic, resource management, and geographical techniques are the three other systematic emphases. Research is being undertaken on Canadian topics, East and Southeast Asia, and Polynesia. The urban-economic group is involved in studies of environment and behaviour, regional development, transportation, and tourism. Within the resources group current research is concerned with water and coastal resources, hazards, recreation, impact assessment, climatology, and forest management policies.

The facilities of the departmental map library and university library have been developed to support this concentration of research effort. Computing facilities and advanced cartographic equipment are available for research purposes. The Department publishes the Western Geographical Series and has produced 20 book-length titles reflecting both the Department's research interests and those of invited contributors. A discussion paper series, the Cornett Papers, is also produced.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: A baccalaureate degree from a recognized university, or its equivalent, with a "B" average (70%) for the last two years is generally considered the minimum required for admission. Students whose native language is not English are required to provide evidence that their knowledge of English is sufficient to allow them to proceed with their studies. Overseas students should not make provision to travel to Canada until they have actually been admitted by the Faculty of Graduate Studies and have evidence of financial resources to allow them to pursue their studies here. The minimum residence requirement for a Master's degree is the equivalent of one full winter session of study (15 units), but most students should expect to spend two academic years in residence. For the degree of Doctor of Philosophy at least the equivalent of two full winter sessions of study beyond the Master's level or three full winter sessions of study beyond the Bachelor's level, and satisfactory completion of the prescribed program are required. Thesis topics are agreed upon after consultation with a supervisory committee and normally reflect the course work taken by the graduate concerned. The Winter Session is divided into two terms—the first, September to December; the second, January to May.

University of Victoria Fellowships of $7,400, applicable to the session September to April, are awarded by the Faculty of Graduate Studies to students of high academic standing registered full-time in the Faculty. Upon recommendation of the Department, these Fellowships may be accompanied by a Summer Supplement of $1,700, applicable to the period May to August, inclusive, for students working full-time on their studies during that period. A very limited number of Fellowships of $10,000 for a twelve-month period are awarded on a competitive basis to truly exceptional students in the University. Part-time Laboratory Instructorships, ranging from $1,488 to $4,456, applicable to the session September to April, are awarded by the Department. These instructors are assigned two to six contact hours per week, together with preparation and marking, during the period September to April. National Research Council Graduate Scholarships and Bursaries and Central Mortgage and Housing Corporation Fellowships may be awarded subject to conditions laid down by these agencies. Information regarding Canada Council and other Graduate Awards may be obtained from the Faculty of Graduate Studies.

STAFF:

Gerald M. Barber, Ph.D., Toronto, 1974, Associate Professor—urban, transportation, economic, quantitative

Philip Dearden, Ph.D., Victoria, 1978, Visiting Assistant Professor—resources management, physical, human

Michael C. R. Edgell, Ph.D., Birmingham, 1967, Associate Professor—physical, biogeography, landscape evaluation, Australia

Charles N. Forward, Ph.D., Clark, 1958, Professor—urban, port functions, urban historical, Canada

Harold D. Foster, Ph.D., London, 1968, Professor—physical, applied geomorphology, hydrology, natural hazards, renewable energy

Patricia P. Gilmartin, Ph.D., Kansas, 1980, Assistant Professor—cartography, remote sensing

Charles H. Howatson, M.A., British Columbia, 1947, Associate Professor—geology, air photo interpretation, western Canada

David C. Y. Lai, Ph.D., London, 1967, Associate Professor—East Asia, Hong Kong Overseas Chinese, China, industrial, urban

Malcolm A. Micklewright, Ph.D., Washington, 1970, Associate Professor—economic, regional planning and development

Peter E. Murphy, Ph.D., Ohio State, 1970, Associate Professor and Graduate Advisor—urban, community planning, tourist management, quantitative

J. Douglas Porteous, Ph.D., Hull, 1969, Professor—urban, planning, behavioral, humanistic, Latin America

William M. Ross, Ph.D., Washington, 1972, Associate Professor—resources, political, legal, coastal management, fisheries

W. R. Derrick Sewell, Ph.D., Washington, 1964, Professor and Chairman—resources, behavioral, policy analysis, water, energy

Stanton E. Tuller, Ph.D., UCLA, 1971, Associate Professor—physical, climatology, heat balance, Japan

Rudolph Wikkramatileke, Ph.D., London, 1955, Professor—South and Southeast Asia, economic and cultural

Colin J. B. Wood, Ph.D., McMaster, 1970, Associate Professor—resources, conflict resolution, economic, quantitative

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Mastin, Jane. "Soundscape Analysis: A Case Study of the South Fairfield Soundscape," 1982.

University of Waterloo

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1962 GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.A., Ph.D., and Resources Management Option in M.A.

GRANTED 7/1/81-6/30/82: 11 M.A., 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 23 M.A. 11 Ph.D.
NOT IN RESIDENCE: 11 M.A. 3 Ph.D.

CHAIRMAN: Christopher R. Bryant

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Ellsworth LeDrew, Graduate Officer, Department of Geography, Faculty of Environmental Studies, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1
Telephone (519) 885-1211, ext. 3404

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography is an integral part of the Faculty of Environmental Studies comprising the Department of Geography, School of Urban and Regional Planning, Department of Man-Environment Studies, and the School of Architecture. Although the graduate programs in Geography and in the School of Urban and Regional Planning are separate and independent, they strongly complement one another. Faculty in Geography and in Planning are readily accessible to all students and there is a constant dialogue between the Geography and Planning graduate students.

The Department offers training and research guidance at the Master's and Doctorate levels. The fields of research specialization are (1) resource analysis (social, economic, and ecological aspects), (2) economic (industrial, rural, regional development), (3) urban, (4) recreation, (5) physical, (6) techniques (air photo interpretation, remote sensing, computer mapping, model-building, statistical analysis). For

Honors B.A. (or equivalent) graduates in Geography, there are two routes for the M.A.—(1) the Thesis M.A., and (2) the Course Work M.A. Requirements for the Course Work M.A. are four graduate courses and the completion of a research paper. Within the course work M.A. there is a Resource Management Option which is open to students with either geography or non-geography honours degrees (or equivalents).Requirements for the Thesis M.A. are three graduate courses and a thesis. For the Ph.D. (after the M.A. degree) course requirements vary with the background and needs of the candidate. A dissertation is mandatory, and competence in a language other than English is expected.

Excellent cartographic, photo interpretation, remote sensing, and computer facilities are available.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan*—3 Terms (September-December; January-April; May-August) *Admission Requirements*—M.A.: B standing (75%) in Honours B.A. or equivalent. Ph.D.: Must possess M.A. (or equivalent) and first class standing. *Financial Aid*—Department Assistantships with a maximum value of $5638 for two terms, plus University of Waterloo scholarship.

STAFF:

James H. Bater, Ph.D., London, 1969, Professor—Soviet Union, industrial

Christopher R. Bryant, Ph.D., London, 1970, Associate Professor and Chairman—rural, quantitative methods

Ronald A. Bullock, Ph.D., London, 1969, Associate Professor—cultural, historical, Africa

Trudi Bunting, Ph.D., Toronto, 1975, Assistant Professor—urban

Aubrey Diem, Ph.D., Michigan, 1961, Professor—regional, Europe

Douglas Dudycha, Ph.D. candidate, London, Assistant Professor—quantitative methods, computer cartography

Christian Dufournaud, Ph.D., Toronto, 1980, Assistant Professor—resources management, multivariate methods

David K. Erb, Ph.D., McGill, 1963, Professor—tropical geomorphology, air photo interpretation, resource inventory

James S. Gardner, Ph.D., McGill, 1968, Professor—Alpine and arctic geomorphology, environmental hazards and impact studies, geographic education

Leonard Guelke, Ph.D., Toronto, 1974, Associate Professor—geographic thought, cartography, historical, Africa

B. Hyma, Ph.D., Pittsburgh, 1971, Associate Professor—population, developing countries

Robert M. Irving, Ph.D., Minnesota, 1966, Professor—rural, Canada

R. Johnson, Ph.D., Minnesota, 1972, Assistant Professor—recreation

Andrzej Kesik, Ph.D., Marie-Curie Sklodowska, 1959, Associate Professor—air photo interpretation, geomorphology, geomorphological surveying

Ralph R. Krueger, Ph.D., Indiana, 1959, Professor and Undergraduate Officer—land use, regional planning and development, Canada

Ellsworth LeDrew, Ph.D., Colorado, 1976, Associate Professor—climatology, remote sensing

B. Matthews, Ph.D., Cornell, Professor—soils geography

Geoffrey R. McBoyle, Ph.D., Aberdeen, 1969, Professor—climatology, geographic thought and methodology

Alexander G. McLellan, Ph.D., Glasgow, 1967, Associate Professor—glacial geomorphology and field studies

Bru[illegible] Mitchell, Ph.D., Liverpool, 1969, Professor—natural resources, quantitative methods

George Mulamoottil, Ph.D., Delhi, Professor, Associate Dean, Graduate Affairs—resource management, environmental planning

Peter H. Nash, Ph.D., Harvard, 1958, Professor—future ekistics

J. G. Nelson, Ph.D., Johns Hopkins, 1959, Professor and Dean, Faculty of Environmental Studies—resources, landscape history

E. Roy Officer, M.A., Wisconsin, 1958, Assistant Professor—historical, political, geographic thought

Richard E. Preston, Ph.D., Clark, 1964, Professor and Associate Chairman—urban, regional development

George B. Priddle, Ph.D., Clark, 1972, Associate Professor—resources management, parkland planning, environmental perception

John B. Robinson, Ph.D., Toronto, 1981, Assistant Professor—energy policy analysis, environmental philosophy

Lorne H. Russwurm, Ph.D., Illinois, 1964, Professor—urban systems, rural-urban fringe

David F. Walker, Ph.D., Toronto, 1971, Professor—industrial, location theory, regional development

Geoffrey Wall, Ph.D., Hull, 1971, Associate Professor—recreation, tourism, resources

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81–6/30/82:

Ph.D.:

Friesen, Brock F. "International Management of the Niagara River," 1981. * Mf., Univ. Microfilms.

Taruvinga, Rangarirai Peter. "Geomorphic Cartography; the Canadian Perspective: An Assessment of Selected Landform Mapping Approaches in Canada," 1981. * Mf., Univ. Microfilms.

Master's:

Bircham, Paul David. "An Investigation of a Public Resource Management Decision: Stalking the Fluoridation 'Paradox,' " 1981.

Boyd, Gary Lee. "Great Lakes Canadian Shoreline Erosion 1973-1980," 1982.

Brady, Richard Franklin. "An Evaluation of Agricultural Outlet Drainage in Ontario in the Drain 36 Example," 1982.

Buszko, Valerie Elaine. "Geomorphological Mapping of the Waterloo Region, Ontario," 1982.

McCulloch, Karen L. "The Evolution and Implementation of Policies for Environmentally Sensitive Areas in the Regional Municipality of Waterloo, Ontario," 1982.

McFarlane, Rhoda C. "The Use of Environmental Indices as a Public Information Technique," 1981.

McLeod, Angus Spreull. "Preserving Natural Areas in Ontario: Theory and Reality," 1982.

McNamee, Kevin Alfred. "Institutional Arrangements to Protect Long Distance Trails: An Evaluation of the Appalachian and Bruce Trail Experiences," 1982.

Miklos, Daniel. "Noncontiguous Farming in an Urban Pressured Environment," 1981.

Reid, Peter D. "An Assessment of the Significance of Remotely Sensed Interface Temperatures for Use in Energy Balance Models," 1981.

Wallis, Richard Charles. "Ontario's Private Campground Industry: Interpreting Present Problems Through an Historical Perspective," 1982.

Webster, Jean R. "Flood Warning Systems in Ontario: Analysis and Evaluation of Performance," 1981.

Williams, Diana. "The Socio Economic Effects and Policy Making Process of the Closure and Re-Opening of the Lake St. Clair Commercial Fishery," 1981

Wong, Alan M.K. "An Exploration of the Growth Center Selection Process in Relation to Smaller Communities: A Case Study in Southern Saskatchewan," 1982.

University of Western Ontario

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1938 GRADUATE PROGRAM FOUNDED: 1946

DEGREES OFFERED: M.A., M.A.T. (Geography), M.Sc., Ph.D.

GRANTED 7/1/81-6/30/82: 6 Masters, 6 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 22 Masters 13 Ph.D.
NOT IN RESIDENCE: 18 Masters 20 Ph.D.

CHAIRMAN: N. L. Nicholson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Coordinator of Graduate Affairs, Department of Geography, University of Western Ontario, London, Ontario, Canada N6A 5C2
Telephone (519) 679-6853

PROGRAMS AND RESEARCH FACILITIES: The Department is prepared to supervise research within the principal interests of its faculty, but particularly in the research foci of urban and regional studies, social geography, recreation and rural studies, physical geography, and quantitative theory and spatial systems. The University offers opportunities for course work and research in Western Hemisphere studies and the Department has close ties with the Departments of Anthropology, Botany, Economics, Geology, History, Political Science and Psychology and the Faculties of Business Administration, Engineering, Science and Education.

The Master's thesis (or research paper in the case of the M.A.T.) and the Ph.D. dissertation represent the end products toward which the individual's program is directed. Most students and many faculty members participate in the forum on Geographical Methodology. Additional course work, determined on an individual basis, and a field camp make up the course requirements for either the Master's or the Ph.D. degree.

Facilities in the Social Science Centre include well-equipped laboratories in geomorphology, pedology, and biogeography, a cartographic division with two full-time cartographers and a map library of over 175,000 sheet-maps and 1300 atlases, with three full-time curators. The Department's computer facilities include remote PDP-10 terminals, a digitizer, analog plotters and full-time programming consultants. Students also have access to the University's Cyber 73-14 (CDC 6400) system and on-line facilties to IBM 360/65, CDC 660 and Univac 1108. The Department maintains a geomorphology field station on Lake Erie. Study space is provided for each graduate student. Students and faculty publish the semiannual geographical journal *Ontario Geography*. Each year several noted geographers from other universities and agencies are invited to give visiting lectures and seminars in the Department.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Master's applicants must have either an Honors Bachelor's degree or equivalent in Geography with at least a B average from a recognized university, or have a degree in another program with at least a B average and have completed course work to the satisfaction of the Department. Ph.D. applicants who hold a Master's degree or equivalent are accepted at the discretion of the Department. Financial aid is available to qualified students through University Scholarships, teaching assistantships, and scholarships from outside agencies. Write to the Coordinator of Graduate Affairs for details of current policy.

FACULTY:

E. M. Bjorklund, Ph.D., Chicago, 1955, Associate Professor—cultural

R. W. Butler, Ph.D., Glasgow, 1973, Associate Professor—recreational

D. G. Cartwright, Ph.D., Western Ontario, 1973, Associate Professor—Canadian studies

K. B. Cawker, Ph.D., Simon Fraser, 1978, Assistant Professor—biogeography and palynology

R. G. Cecil, Ph.D., McGill, 1973, Assistant Professor—economic (Caribbean)

W. R. Code, Ph.D., UC, Berkeley, 1971, Associate Professor—urban

M. F. Goodchild, Ph.D., McMaster, 1969, Professor—quantitative methods

H. A. Hosse, Ph.D., Ottawa, 1962, Professor—urban and regional planning

D. G. Janelle, Ph.D., Michigan State, 1966, Associate Professor—spatial forecasting, urban conflict, transportation

R. H. King, Ph.D., Saskatchewan, 1969, Associate Professor—geomorphology, soils

B. H. Luckman, Ph.D., McMaster, 1973, Associate Professor—geomorphology

R. McDaniel, M.A., Western Ontario, 1964, Associate Professor—geography of the future, economic

N. L. Nicholson, Ph.D., Ottawa, 1951, Ed.D., Toronto, 1975, Senior Professor and Chairman—Canada, cartology

R. W. Packer, M.A., Cantab., 1948, Professor—geomorphology

A. K. Philbrick, Ph.D., Chicago, 1949, Professor Emeritus—cultural

E. G. Pleva, Ph.D., Minnesota, 1937, Professor Emeritus—resources planning, Great Lakes area

H. W. Taylor, Ph.D., Maryland, 1962, Associate Professor—population (Latin America)

M. J. Troughton, Ph.D., Western Ontario, 1970, Associate Professor—agricultural

W. Warntz, Ph.D., Pennsylvania, 1955, FRSC Professor—theoretical geography, macrogeographic systems, history and philosophy of science

C. F. J. Whebell, Ph.D., London, 1961, Associate Professor—political

W. R. Wightman, Ph.D., 1964, Associate Professor—historical

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Armstrong, Robin P. "Mapping Social Space: A Social Network Approach," 1982.

Khondakar, Nizamuddin. "Some Changes in the Socioeconomic and Spatial Characteristics of Ethnic Groups in London, Ontario, between 1961 and 1971," 1981.

Leao, Sonia de Oliveira. "The Evolution of Agricultural Land Use Patterns in the State of Bahia, Brazil," 1982.

Pooler, James A. "Entropy Maximization, Information Minimization and Population Potential: Joint Considerations," 1982.

Shaw, Anthony B. "Influence of Institutional and Structural Constraints on Agricultural Innovation Adoption: A Case Study of the Modernization of Rice Production in Guyana," 1981.

Udofia, William. "Factors of Cooperative Development: Guyana's Experience in Modernization," 1981.

Master's:

Carty, Stephen John. "Central Business District Floor Space Use in London, Ontario," 1981.

Owens, Linda A. "Resident Reaction to Tourism on Manitoulin Island," 1981.

Peters, John H. "Commercial Fishing in Lake Huron, 1800 to 1915: The Exploitation and Decline of Whitefish and Lake Trout," 1982.

Pompilii, Sergio E. "Suburbanization in London, Ontario—1927 to 1977: A Study of Changing Morphology," 1982.

Rizzo, Brian R. "The Point of Minimum Aggregate Travel: Graphical, Analog and Numerical Solutions," 1982.

Smith, David C. "Oil Employees and Leisure in Newfoundland: Implications for Recreation Planning," 1982.

Wilfrid Laurier University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1960 GRADUATE PROGRAM FOUNDED: 1967

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 5

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 15

CHAIRMAN: Houston C. Saunderson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. C. Grant Head, Graduate Officer, Department of Geography, Wilfrid Laurier University, Waterloo, Ontario, Canada N2L 3C5
Telephone (519) 884-1970, ext. 288

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers courses and research guidance at the Master's level in the fields of: (1) applied physical geography, (2) cultural and historical geography, (3) economic and urban geography, and (4) resources management.

There are two options from which a graduate student may choose. The thesis option normally involves completion of a minimum of four term courses and a thesis. Participation in graduate colloquia and field trips is normally required.

The non-thesis option allows completion of the M.A. program through course work. Nine term or equivalent graduate courses are required. As well the student is restricted to a maximum of four term courses in any one of the general areas of geography offered by this department. Cartographic and computer facilities are available.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan*—Academic Year, September to April. *Admission Requirements*—A minimum of second class honours or B standing in the graduating year of an Honours Program in Geography or its equivalent. *Financial Aid*—Department Teaching Fellowships with a value of $3500 from September-April. Additional Teaching Fellowships valued at $1750 are available in the summer months. University scholarships valued at $1700 are also available. In addition, Research Assistantships are available from faculty research grants.

STAFF:

Barry N. Boots, Ph.D., Rutgers, 1972, Associate Professor—locational analysis, urban, quantitative

Jerry A. Hall, Ph.D., Clark, 1973, Associate Professor—physical resources, climatology

C. Grant Head, Ph.D., Wisconsin, 1971, Associate Professor—historical, cultural, cartography

Alfred Hecht, Ph.D., Clark, 1972, Professor—economic, urban

Kenneth Hewitt, Ph.D., London, 1967, Professor—natural hazards, mountain environments, ecological theory

Ian A. McKay, M.A., Western Ontario, 1966, Assistant Professor—cultural, historical

John H. McMurry, Ph.D., Michigan, 1950, Professor—resources, land and wildlife management

Russell W. Muncaster, Ph.D., Clark, 1972, Associate Professor—urban, economic, quantitative

Helen E. Parson, Ph.D., Kentucky, 1976, Assistant Professor—resources, rural

James Pooler, Ph.D., Western Ontario, 1982, Assistant Professor—economic, urban, spatial modelling

Houston C. Saunderson, Ph.D., Toronto, 1974, Associate Professor—geomorphology, sedimentation

Tony Shaw, Ph.D., Western Ontario, 1981, Assistant Professor—agro-climate, agricultural land use

Graham Smith, Ph.D., Waterloo, 1982, Assistant Professor—resources management, public participation

Gunars Subins, Ph.D., Western Ontario, 1974, Associate Professor—physical, geomorphology

Herbert A. Whitney, Ph.D., Michigan, 1962, Associate Professor—geographic thought and method, cultural, historical

Bruce S. Young, Ph.D., Natal, 1972, Professor—economic, tourism, developing world

TITLES OF THESES COMPLETED 7/1/81-6/30/82:

Master's:

Schnare, Michael. "An Analysis of Spatial Trends and Factors Associated with Population Growth for Small Towns in Southwestern Ontario, 1961-76," 1981.

Thomas, Gerald. "The Quality Outdoor Recreation Component in Multi-Purpose Conservation Areas: A User Assessment Devised and Applied to Pinehurst Lake Conservation Area," 1981.

Weaver, David. "Tobago: The Spatial Development of a Caribbean Tourist Industry," 1981.

University of Windsor

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1965 GRADUATE PROGRAM FOUNDED: 1967

DEGREES OFFERED: M.A.

GRANTED 7/1/81-6/30/82: 4

GRADUATE STUDENTS IN RESIDENCE: 16
NOT IN RESIDENCE: 3

CHAIRMAN: Ihor Stebelsky

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Secretary, Department of Geography, University of Windsor, Windsor, Ontario, Canada N9B 3P4
Telephone (519) 253-4232, ext. 446

PROGRAMS AND RESEARCH FACILITIES: Instruction and research guidance are offered by the Department in the fields of Climatology and Geomorphology; Historical Geography; Regional Studies, particularly of Latin America, Arctic Canada, the Soviet Union, Western Europe, and South Asia; Resource and Industrial Geography; Urban Geography and Planning; Population; and Medical Geography. Interdisciplinary programs are available with other Departments in the University, and with other universities, in both physical and regional geography.

The University of Windsor is located on the Detroit River close to the downtown areas of both Windsor and Detroit, and to Wayne State University and the University of Michigan. The University has an IBM 3031 computer, and a new library of 1,000,000 volumes. The Department of Geography is located in Windsor Hall, with map library, cartography and physical geography laboratories, and graduate study space. The Department operates a well-equipped climatological station on campus, and offers an Arctic program at Frobisher Bay, N.W.T.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Windsor offers graduate courses in the September-December and January-April semesters, though courses can be taken in Inter-Session and Summer School.

Normally a B+ average in a four-year Honors Program in geography or its equivalent (90 credits in Geography out of 132 undergraduate credits) from a recognized University admits to a one-year program. Candidates from other disciplines are admitted to a two-year program. Five semester-length courses, a language or computer skills requirements, and a thesis complete the M.A. degree.

Financial aid is available to excellent students through University teaching assistantships, and fellowships to a maximum of $7200, as well as from Province of Ontario graduate fellowships, Canada Council, National Research Council, and Central Mortgage and Housing Corporation.

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STAFF:

Anthony Blackbourn, Ph.D., Toronto, 1968, Associate Professor—industrial, Europe

Morris Blenman, Ph.D., McGill, 1975, Assistant Professor—transportation, social geography, Caribbean

Conrad P. Gravenor, Ph.D., Indiana, 1952, F.R.S.C., Professor and Dean of Science & Mathematics—glacial geology

Frank C. Innes, Ph.D., McGill, 1967, Professor—historical, Caribbean, North America, social indicators

John Jacobs, Ph.D., Colorado, 1973, Associate Professor—climatology, Arctic studies

Amrit Lall, Ph.D., Indiana, 1958, Associate Professor—population, South Asia

Placido LaValle, Ph.D., Iowa, 1965, Associate Professor—geomorphology, quantitative methods

Jack Ransome, Ph.D., Harvard, 1955, Professor—urban and applied geography

Gerald Romsa, Ph.D., Florida, 1968, Professor—urban planning, Anglo-America

Marie Sanderson, Ph.D., Michigan, 1965, Professor—climatology, water balance, Great Lakes

Ihor Stebelsky, Ph.D., Washington, 1967, Professor and Chairman—historical, Soviet Union

Alan Trenhaile, Ph.D., Wales, 1969, Professor—coastal and glacial geomorphology

Paul Vandall, M.A., Western Ontario, 1961, Associate Professor—political, regional planning, Great Lakes

Ronald Welch, M.A., Western Ontario, 1969, Coordinator of Cartographic Services—cartography

TITLES OF THESES COMPLETED 7/1/81–6/30/82:

Master's:

Bakama, Ray. "In-Migration in the Windsor Metropolitan Area, 1975-81: An Examination of the Demographic, Socio-Economic Characteristics of the Migrants and the Factors Relating to Windsor's Attractiveness," 1982.

Egyedy, Edward. "Demand for Accommodations by Senior Citizens in the City of Windsor, 1981," 1982.

Renaud, Judy. "Spatial Variations of Chronic Schizophrenia in Windsor, Ontario from January 1, 1978 to June 30, 1980," 1982.

Tan, Teck Kian. "Analysis of the Single-Family Detached Housing Market in Windsor," 1982.

York University

GRADUATE PROGRAMME IN GEOGRAPHY

DATE FOUNDED: 1962 GRADUATE PROGRAMME FOUNDED: 1967

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/81-6/30/82: 6 Master's, 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 18 M.A. 4 Ph.D.
NOT IN RESIDENCE: 8 M.A. 3 Ph.D.

DIRECTOR: J. David Wood

FOR CATALOG AND FURTHER INFORMATION WRITE TO: J. David Wood, Director, Graduate Programme in Geography, York University, Downsview, Ontario, Canada M3J 1P3
Telephone (416) 667-3740

PROGRAMMES AND RESEARCH FACILITIES: Doctoral research is offered in four fields of specialization: biogeography; cultural-historical geography; resource analysis; and urban-economic geography. The Ph.D. degree is seen as a research degree, and students are not expected to take many courses. A master's degree can be pursued in almost any branch of the discipline, including the option of an M.Sc. in biogeography.

The M.A./M.Sc. candidate chooses one of two programmes: (a) two full course equivalents and a thesis, (b) three full course equivalents and a research paper. It is expected that full-time M.A./M.Sc. students will complete all requirements within two academic years. The Programme has a large faculty representing a great number of different academic institutions, resulting in a wide variety of interests and points of view. Facilities include office and workroom space, a departmental library, an electronic map digitizer, remote APL terminals and physical geography laboratories equipped for a wide range of analytical work including soil, water, pollen, and vegetation analysis. Holdings of the university library are extensive both in Geography and in cognate fields. In addition there are significant libraries and archives elsewhere in Metropolitan Toronto. The university's computer facilities are based on ITEL AS-6 and DEC 10, and the department employs its own full-time programmer. A discussion paper and a monograph series (in which doctoral theses appear) are published.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The academic session extends from mid-September until April; spring and summer can be used for writing the thesis or research paper, or conducting field work. The usual admission to the M.A./M.Sc. level is from an Honours degree from a recognized university, or equivalent qualification, with at least B (second class) standing. Doctoral applicants are expected to have completed their M.A./M.Sc. by the time they enter. The master's degree can be undertaken part-time.

The programme offers teaching assistantships to all full-time graduate students. Some graduate (research) assistantships are also available, and first class students usually are offered a York scholarship (currently $3000). Applicants are expected to seek other awards, from agencies such as the Ontario Government, Social Sciences and Humanities Research Council of Canada, Central Mortgage and Housing Corporation, Natural Sciences and Engineering Research Council Canada. Financial assistance also is generated by research grants to individual faculty members.

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TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/81-6/30/82:

Ph.D.:

Bardecki, Michal James. "Wetland Preservation Policies in Southern Ontario: A Delphi Approach," 1981.* Mf., National Library of Canada, Ottawa.

Master's:

Askew, Ian David. "A Model for Generating and Evaluating Alternative Location Strategies for Services in Rural Areas of Britain," 1981.

Hamalainen, Peter. "Patterns of Faunal Exploitation by the Petun Indians," 1981.

Kavanagh, Kevin C. "Demographic Characteristics of *Tsuga Canadensis* (L.) Carr. at the Centre and Northern Edge of Its Range: A Comparison," 1982.

Miller, N. Paul. "Modifications to a Method for Evaluating Alternate Transportation Corridors Using Multiple Criteria," 1982.

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Switzer, Sally T. "Non-Engineering Design and Implementation Aspects of Stormwater Management—Wet and Dry Ponds," 1982.

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Frey, Glen R.   Bowling Green State
Frost, Melvin J.   Arizona State
Frost, Robert P.   SIU-Edwardsville
Frye, Howard E.   Memphis State
Fryer, Donald W.   Hawaii
Fryman, James F.   Northern Iowa
Fuchs, Roland J.   Hawaii
Fujita, Masahisa   Pennsylvania
Fuller, Anthony M.   Guelph

Fuller, Gary A. Hawaii
Fuller, John W. Iowa
Fung, Ka Iu Saskatchewan
Furuseth, Owen J. UNC Charlotte

Gab, Orville S. Dakota State
Gabler, Robert E. W. Illinois
Gade, Daniel W. Vermont
Gade, Ole Appalachian State
Gagnon, Hugues Ottawa
Gagnon, Robert Sherbrooke
Gaines, John F. CSU, Northridge
Gale, Stephen Pennsylvania
Galloway, Jock H. Toronto
Ganyard, David W. W. Illinois
Gardner, James S. Waterloo
Gassaway, Alexander R. Portland State
Gauthier, Howard L. Ohio State
Gavis, Jerome Johns Hopkins
Geib, Margaret Akron
Gellman, Aaron Pennsylvania
Gentilcore, R. Louis McMaster
Gerlach, Russel SW Missouri State
Gersmehl, Philip J. Minnesota
Gesler, Wilbert M. N. Carolina-Chapel Hill
Getis, Arthur Illinois
Geurts, Marie-Anne Ottawa
Gibson, E. M. Simon Fraser
Gibson, Gail G. UNC Charlotte
Gibson, James R. York
Gibson, Lay James Arizona
Gilbert, R. Queen's
Gildersleeve, C. R. Nebraska-Omaha
Gilmartin, Patricia P. Victoria
Ginsberg, Ralph Pennsylvania
Ginsburg, Norton Chicago
Giovinetto, Mario B. Calgary
Girard, William W. Mankato State
Glacken, Clarence J. Berkeley
Gladfelter, Bruce G. Illinois-Chicago
Glick, Thomas E. Boston
Glickman, Norman J. Pennsylvania
Goad, Sharon I. Louisiana State
Gober, Patricia Arizona State
Goff, James F. Mankato State
Goggins, Lathardus Akron
Goheen, P. G. Queen's
Gohstand, Robert CSU, Northridge
Golant, Stephen M. Florida
Golledge, Reginald G. Santa Barbara
Gonzalez, Alfonso Calgary
Good, Charles M. VPI&SU
Goodchild, M. F. W. Ontario
Goodman, James M. Oklahoma
Goodman, Robert J. Wayne State
Gordon, Burton L. San Francisco State
Gordon, Jeffrey J. Bowling Green
Gordon, Marvin George Washington
Gore, Dorothy J. SIU-Edwardsville
Gosenfield, Norman CSU, Los Angeles
Gossette, Franklin E. Delaware
Gough, G. Patrick Guelph
Gould, Peter R. Pennsylvania State
Goward, Samuel N. Columbia
Graf, William L. Arizona State
Graff, Thomas O. Arkansas
Granger, Orman Berkeley
Gravenor, Conrad P. Windsor
Green, Jerry E. Miami-Ohio
Green, Milford B. Saskatchewan
Greenberg, Michael R. Rutgers
Greenland, David E. Colorado
Greenwood, Brian Toronto
Greenwood, Ned H. San Diego State
Greer, Charles E. Indiana
Greer-Wootten, Bryn York
Gregor, Howard F. Davis
Gregory, Mark Oklahoma State
Griffin, Donald W. W. Illinois
Griffin, Ernst C. San Diego State
Griffith, Daniel A. SUNY-Buffalo
Grima, Angelo P. Toronto
Grimes, Thomas P. Ball State
Gritzner, Charles F. S. Dakota State
Gritzner, Janet H. S. Dakota State
Grivetti, Louis E. Davis
Groop, Richard Michigan State
Grossman, Lawrence S. VPI&SU
Groves, Paul A. Maryland
Gruntfest, Eve C. Colorado
Guelke, Leonard Waterloo
Guernsey, James L. Indiana State
Guest, B. Ross N. Illinois
Gunter, Charles E. Tennessee
Gunton, T. I. Simon Fraser
Gvosdetsky, Vasyl M. Utah
Gwyn, Q.H.J. Sherbrooke

Haack, Barry N. Ball State
Haag, William G. Louisiana State

Haddock, Kenneth	Towson State
Hadley, Richard F.	Denver
Hafner, James A.	Massachusetts
Hage, Keith D.	Alberta
Haglund, Donn K.	Wisconsin-Milwaukee
Haiman, Richard	CSU, Chico
Hale, Gerry A.	UCLA
Hall, E. Lorene	E. Michigan
Hall, Frederick L.	McMaster
Hall, Jerry A.	Wilfrid Laurier
Hall, Peter	Berkeley
Hall, Stephen A.	North Texas State
Hamelin, Louis-Edmond	Laval
Hamill, Louis	Calgary
Hamilton, William	Rutgers
Hammond, Edwin H.	Tennessee
Han, Sin-Fong	CSU, Los Angeles
Handcock, Gordon	Memorial
Hanham, Robert Q.	W. Virginia
Hanke, Steve	Johns Hopkins
Hankins, William W.	E. Carolina
Hannes, Gerald P.	CSU, Fullerton
Hannon, Bruce M.	Illinois
Hansen, Carl	Riverside
Hanten, Edward W.	Akron
Hardwick, Walter G.	British Columbia
Hare, F. Kenneth	Toronto
Haring, L. Lloyd	Arizona State
Harlin, John M.	Oklahoma
Harman, Jay R.	Michigan State
Harnapp, Vern	Akron
Harper, Robert A.	Maryland
Harper, Robert C.	Shippensburg
Harries, Keith D.	Oklahoma State
Harrington, John A., Jr.	Oklahoma
Harris, Chauncy D.	Chicago
Harris, R. C.	British Columbia
Harris, S. R.	British Columbia
Harris, Stuart A.	Calgary
Harrison, Peter	Ottawa
Hart, John Fraser	Minnesota
Hart, Richard	Illinois State
Hartgen, David T.	SUNY-Albany
Hartshorn, Joseph H.	Massachusetts
Hartshorn, Truman A.	Georgia State
Hartshorne, Richard	Wisconsin-Madison
Harvey, David	Johns Hopkins
Harvey, Milton E.	Kent State
Haupert, John S.	SUNY-Buffalo
Havlik, Spenser W.	Colorado
Hawkes, H. Bowman	Utah
Hawley, Arthur J.	N. Carolina-Chapel Hill
Hay, John	British Columbia
Hayden, Robert S.	George Mason
Haynes, Kingsley E.	Indiana
Hays, H. Donald	Alabama
Hayter, R.	Simon Fraser
Hayuk, Hlib S.	Towson State
Head, C. Grant	Wilfrid Laurier
Hecht, Alfred	Wilfrid Laurier
Hecht, Melvin E.	Arizona
Hecock, Richard D.	Oklahoma State
Hegen, Edmund E.	W. Kentucky
Hehr, John G.	Arkansas
Heiden, Noland R.	Indiana U. of Pa.
Heidenreich, Conrad E.	York
Heintzelman, Oliver H.	Oregon State
Heiser, W. Wayne	SUNY-Albany
Helburn, Nicholas	Colorado
Helgren, David M.	Miami
Helin, Ronald A.	CSU, Fullerton
Heller, Charles F.	W. Michigan
Henderson, David A.	CSU, Northridge
Henderson, Floyd M.	SUNY-Albany
Henkel, Ray	Arizona State
Henry, James A.	Florida
Henry, Norah F.	SUNY-Binghamton
Hepner, George F.	Kentucky
Herman, Vera L.	Ohio State
Herold, Laurance C.	Denver
Herrem, Peter D.	Calgary
Hess, Charles F.	SIU-Edwardsville
Hewes, Leslie	Nebraska-Lincoln
Hewings, Geoffrey J. D.	Illinois
Hewitt, Kenneth	Wilfrid Laurier
Heyl, R. James	Georgia
Hickin, E. J.	Simon Fraser
Hickok, Floyd C.	North Dakota
Hicks, Louis E.	Murray State
Highsmith, Richard M., Jr.	Oregon State
Hill, A. David	Colorado
Hill, Alan R.	York
Hill, Ronald D.	Hawaii
Hilliard, Sam B.	Louisiana State
Hills, Theo L.	McGill
Hiltner, John	Bowling Green State
Hitchcock, John R.	Toronto
Hitchman, James H.	W. Washington
Hobgood, Jay S.	Nebraska-Lincoln
Hodge, David C.	Washington
Hodgkins, Jordan A.	Kent State
Hodgson, M. John	Alberta
Hodler, Thomas W.	Georgia
Hoerauf, Eugene A.	W. Washington

Hoffman, George W. Texas
Hoffman, Lawrence A. Toledo
Hoffman, Wayne L. W. Kentucky
Hoffpauir, Robert CSU, Northridge
Hogan, Edward Patrick S. Dakota State
Holcomb, Briavel Rutgers
Hole, Francis D. Wisconsin-Madison
Holleb, Doris Chicago
Hollingsworth, John M. Indiana
Holly, Brian P. Kent State
Holmes J. Queen's
Holmes, William M. North Texas State
Holtgrieve, Donald G. CSU, Hayward
Holz, Robert K. Texas
Holzner, Lutz Wisconsin-Milwaukee
Homenuck, H. Peter M. York
Honey, Rex D. Iowa
Hook, John C. Indiana State
Hooks, W. Gary Alabama
Hooson, David J. M. Berkeley
Hordon, Robert M. Rutgers
Hornbeck, David, Jr. CSU, Northridge
Horsfall, R. B. Simon Fraser
Horsley, A. Doyne SIU-Carbondale
Horst, Oscar H. W. Michigan
Horton, Frank E. Wisconsin-Milwaukee
Hoskins, Earl R. Texas A&M
Hossé, H. A. W. Ontario
Hough, Richard F. San Francisco State
Howard, Robert B. CSU, Northridge
Howarth, Philip J. McMaster
Howatson, Charles H. Victoria
Howe, George M. E. Michigan
Howe, Robert Indiana State
Howenstine, William NE Illinois
Howland, Marie Maryland
Hoy, Don R. Georgia
Hoy, Harry E. Oklahoma
Hsu, Mei-Ling Minnesota
Hsu, Shin-yi SUNY-Binghamton
Huber, Thomas P. Colorado
Hudson, John C. Northwestern
Hudson, Tim W. S. Mississippi
Huegel, Daniel N. Illinois
Huff, David L. Texas
Huff, James O. Illinois
Hufty, André Laval
Hughes, John D. N. Michigan
Hughes, Travis H. Alabama
Hugill, Peter J. Texas A&M
Hulbert, Francois Laval
Hultquist, John F. Idaho
Hultquist, Nancy B. Idaho
Hunker, Henry L. Ohio State
Hunter, John M. Michigan State
Hutchinson, Charles F. Arizona
Hutchinson, I. Simon Fraser
Huttlinger, Frank D. Alabama
Hyma, B. Waterloo

Imperatore, William Appalachian State
Ingalls, Gerald L. UNC Charlotte
Innes, Frank C. Windsor
Ironside, R. Geoffrey Alberta
Irving, Robert M. Waterloo
Irwin, Daniel SIU-Carbondale
Irwin, David H. Murray State
Isaac, Ronald H. Ohio
Isard, Walter Pennsylvania
Isserman, Andrew Iowa
Ives, Jack D. Colorado
Ives, Sallie M. UNC Charlotte

Jaakson, Reiner Toronto
Jackson, Edgar L. Alberta
Jackson, Philip L. Oregon State
Jackson, W. A. Douglas Washington
Jacobs, John Windsor
Jacobson, Daniel Michigan State
Jakle, John A. Illinois
Jakubs, John F. South Carolina
James, John W. Nevada Reno
James, Preston E. Syracuse
Janelle, D. G. W. Ontario
Janes, Robert W. Maryland
Janiskee, Robert L. South Carolina
Jarvis, Richard SUNY-Buffalo
Jaworski, Eugene E. Michigan
Jenks, George F. Kansas
Jensen, J. Granville Oregon State
Jensen, John R. South Carolina
Jensen, Robert G. Syracuse
Jett, Stephen C. Davis
Johannessen, Carl L. Oregon
Johansen, Harley E. Idaho
Johnsen, Norman C. SIU-Edwardsville
Johnson, Claude Riverside
Johnson, Daniel M. Portland State
Johnson, David C. SW Louisiana
Johnson, Denis B. Alberta

Johnson, Donald L.   Illinois
Johnson, Douglas L.   Clark
Johnson, Elias   SW Missouri State
Johnson, Eric S.   Illinois State
Johnson, Gary E.   S. Dakota State
Johnson, J. Peter, Jr.   Carleton
Johnson, James   UCLA
Johnson, Kirsten   Clark
Johnson, Ladd L.   CSU, Chico
Johnson, Lane J.   Temple
Johnson, Morris E.   Utah
Johnson, Peter   Ottawa
Johnson, R.   Waterloo
Johnson, Warren A.   San Diego State
Johnson, William C.   Kansas
Jones, David L.   SIU-Carbondale
Jones, David R. W.   Calgary
Jones, Donald W.   Colorado
Jones, Emlyn Trevor   Ball State
Jones, J. Richard   Texas
Jones, James I.   Mississippi State
Jopling, Alan V.   Toronto
Jordan, Terry G.   Texas
Joseph, Alun E.   Guelph
Joyal, Alfred N.   N. Michigan
Jumper, Sidney R.   Tennessee
Jurdant, Michel   Laval
Justham, Stephen A.   Ball State

Kahn, Alfred   SIU-Edwardsville
Kakiuchi, George H.   Washington
Kalkstein, Laurence S.   Delaware
Kamerling, David   George Washington
Kane, Phillip S.   CSU, Northridge
Kang, Darshan S.   Montana
Kaniss, Phyllis   Pennsylvania
Karan, P. P.   Kentucky
Karaska, Gerald J.   Clark
Kariel, Herbert G.   Calgary
Karinen, Arthur E.   CSU, Chico
Kasperson, Roger E.   Clark
Kates, Robert W.   Clark
Kay, Jeanne   Utah
Kay, Paul A.   Utah
Kaye, B.   Manitoba
Kaye, John M.   Mississippi State
Kayser, Edmond   Ottawa
Keady, Donald M.   Mississippi State
Kearney, Michael S.   Maryland
Kearns, Kevin C.   N. Colorado
Keddie, Philip D.   Guelph
Keen, Elmer A.   San Diego State
Kelley, Philip S.   Mankato State
Kellman, Martin C.   York
Kellerman, Aharon   Maryland
Kelly, Kenneth   Guelph
Kemp, W. B.   McGill
Kennamer, Lorrin G.   Texas
Kenyon, James B.   Georgia
Kerr, Donald   Toronto
Kershaw, G. Peter   Alberta
Kershaw, Herbert   Oklahoma State
Kersten, Earl W.   Nevada Reno
Kesel, Richard H.   Louisiana State
Kesik, Andrzej   Waterloo
Ketteringham, W. J.   CSU, Fullerton
Kiang, Ying-Cheng   NE Illinois
Kiewiet de Jonge, E. J. C.   San Diego State
Kim, Hyun-Sik   Maryland
Kimber, Clarissa T.   Texas A&M
Kimerling, A. Jon   Oregon State
Kind, Thomas C.   Murray State
King, James W.   Utah
King, Leslie J.   McMaster
King, R. H.   W. Ontario
Kingsbury, Robert C.   Indiana
Kircher, Harry B.   SIU-Edwardsville
Kirchherr, Eugene C.   W. Michigan
Kirchner, James   Illinois State
Kirchner, John   CSU, Los Angeles
Kirchoff, D. Michael   Syracuse
Kirkeberg, Max C.   San Francisco State
Klemas, Vytautas   Delaware
Klingensmith, Robert D.   Ohio State
Klink, John C.   Miami-Ohio
Kniffen, Fred B.   Louisiana State
Knight, C. Gregory   Pennsylvania State
Knight, David B.   Carleton
Knos, Duane F.   Clark
Knox, James C.   Wisconsin-Madison
Kodras, Janet E.   Florida State
Koelsch, William A.   Clark
Koepke, Robert L.   SIU-Edwardsville
Kohler, Fred E.   W. Illinois
Koller, E. Frank   CSU, Fresno
Kollmorgen, Walter M.   Kansas
Kontuly, Thomas M.   Boston
Kooser, Jaime C.   Washington
Kopec, Richard J.   N. Carolina-Chapel Hill
Kopplin, Bruce E.   Nebraska-Lincoln
Kornhauser, David H.   Hawaii
Koroscil, P. M.   Simon Fraser

Korsok, Albert	Akron
Kosinski, Leszek A.	Alberta
Kostanick, Huey Louis	UCLA
Kostbade, J. Trenton	Missouri-Columbia
Kouba, Leonard J.	N. Illinois
Kovacik, Charles F.	South Carolina
Kowalchyk, John P.	SUNY-Binghampton
Kracht, James B.	Texas A&M
Kramer, Fritz L.	Portland State
Kramer, Terrill J.	Nevada Reno
Kratzmeier, Walter H.	Towson State
Kreutzwiser, Reid D.	Guelph
Kriesel, Karl M.	NE Illinois
Kromm, David E.	Kansas State
Krueger, Ralph R.	Waterloo
Krumme, Gunter	Washington
Kuchler, A. William	Kansas
Kulkarni, Gopal S.	Indiana U. of Pa.
Kung, Hsiang-te	Memphis State
Kunstmann, John W.	Bowling Green State
Kureth, Elwood J. C.	E. Michigan
Kurtz, V. E.	SW Missouri State
Kus, James S.	CSU, Fresno
Kutsche, Katherine L.	N. Colorado
Lagarec, Daniel	Ottawa
Lai, David C. Y.	Victoria
Lai, Poh-Chin	Maryland
Laidig, Kermit	Shippensburg
Laidlaw, Charles D.	Maryland
Lake, Robert W.	Rutgers
Lakshmanan, T. R.	Boston
Lall, Amrit	Windsor
Lam, Nina S-N.	Ohio State
Lamb, Robert B.	CSU, Northridge
Lampe, Fred A.	SIU-Edwardsville
Lamme, Ary J. III	Florida
Landing, James E.	Illinois-Chicago
Landis, Glenn	S. Dakota State
Langlois, André	Ottawa
Langran, Kenneth J.	W. Washington
Lan-Sheng Zhang	Massachusetts
Lantis, David W.	CSU, Chico
Larimore, Philip B.	Louisiana State
Larkin, Robert P.	Colorado
Larson, Albert J.	Illinois-Chicago
Larson, Robert	Indiana State
Laswell, Troy J.	Mississippi State
Latham, James	Florida Atlantic
Latta, Lois	Indiana State
Lauria, Mickey	Iowa
Lauriol, Bernard	Sherbrooke
LaValle, Placido	Windsor
Laverdière, Camille	Montreal
Lavin, Stephen J.	Nebraska-Lincoln
Lawson, Merlin P.	Nebraska-Lincoln
Laycock, Arleigh H.	Alberta
Leahy, Edward P.	E. Carolina
Leahy, Palmyra E.	E. Carolina
Leatherman, Stephen P.	Maryland
LeDrew, Ellsworth	Waterloo
Lee, Chung-Myun	Utah
Lee, David	Florida Atlantic
Lee, Mary Ann	Iowa
Lee, Robert E.	CSU, Fresno
Lee, Russell	Iowa
Lee, Tso-Hwa	CSU, Fullerton
Lee, Yuk	Colorado
Lehrer, Paul L.	N. Colorado
Leighly, John B.	Berkeley
Leinbach, Thomas R.	Kentucky
Lemon, James T.	Toronto
Lentnek, Barry	SUNY-Buffalo
Letarte, Jacques	Laval
Leverenz, Jon	Chicago
Levin, Melvin B.	Maryland
Lewis, Donald W.	Toledo
Lewis, George K.	Boston
Lewis, John E.	McGill
Lewis, Laurence A.	Clark
Lewis, Lawrence T.	W. Illinois
Lewis, Nancy D.	Hawaii
Lewis, Peirce F.	Pennsylvania State
Lewis, Richard T.	Kent State
Lewis, Robert A.	Columbia
Lewthwaite, Gordon R.	CSU, Northridge
Ley, David	British Columbia
Liaw, Kao-Lee	McMaster
Lieber, Stanley R.	SIU-Carbondale
Lier, John	CSU, Hayward
Limbird, Arthur G.	Calgary
Lin, Gong-Yuh	CSU, Northridge
Lind, Aulis	Vermont
Lindberg, James B.	Iowa
Lineback, Neal G.	Alabama
Lins, Thomas W.	Mississippi State
Lipsey, J. Michael	Michigan State
Little, Richard S.	W. Virginia
Liu, Juanita	Hawaii
Lloyd, Howell C.	Miami-Ohio
Lloyd, Robert E.	South Carolina
Lobb, C. Gary	CSU, Northridge

Loeffler, M. John	Colorado
Loeser, Cornelius J.	N. Illinois
Logan, Byron E.	Miami-Ohio
Logan, Richard F.	UCLA
Lo, Miriam Kui Kiaw	Mankato State
Lonergan, Stephen C.	McMaster
Long, Robert G.	Tennessee
Longbrake, David B.	Denver
Longwell, A. Richard	W. Illinois
Lonsdale, Richard E.	Nebraska-Lincoln
Lord, J. Dennis	UNC Charlotte
Lossau, Carl S.	SIU-Edwardsville
Louder, Dean	Laval
Lounsbury, John F.	Arizona State
Lovell, W. G.	Queen's
Lovingood, Paul E.	South Carolina
Lowe, John	George Washington
Lowry, Mark II	W. Kentucky
Loy, William G.	Oregon
Lozowski, Edward P.	Alberta
Lu, Jonathan J.	Northern Iowa
Lucas, Robert C.	Montana
Luckman, B. H.	W. Ontario
Ludwig, Gail S.	Missouri-Columbia
Luebke, F. C.	Nebraska-Lincoln
Lukermann, Fred E.	Minnesota
Lundgren, Jan	McGill
Luten, Daniel B.	Berkeley
Lycan, D. R.	Portland State
Lyon, Edward E.	Ball State
Ma, Laurence	Akron
MacDougall, E. Bruce	Massachusetts
MacEachren, Alan M.	VPI&SU
Macey, Susan M.	Kentucky
MacKay, David B.	Indiana
Mackay, J. Ross	British Columbia
Mackenzie, S.	Queen's
MacKinnon, Ross D.	SUNY-Binghamton
MacMahan, Horace A., Jr.	E. Michigan
MacPherson, A.	Simon Fraser
Macpherson, Alan G.	Memorial
Macpherson, Joyce Brown	Memorial
Madden, Janice F.	Pennsylvania
Maechling, Philip	Montana
Mage, Julius A.	Guelph
Mahaney, William C.	York
Major, David C.	Clark
Makuch, Stanley M.	Toronto
Malanson, George P.	Oklahoma State
Malecki, Edward J., Jr.	Oklahoma
Mancell, Robert B.	E. Michigan
Manners, Ian R.	Texas
Mannion, John J.	Memorial
Manson, Gary A.	Michigan State
Mantei, Erwin	SW Missouri State
Maraffa, Thomas A.	VPI&SU
Marando, Vincent	Maryland
Marasciulo, Edward	George Washington
Marble, Duane F.	SUNY-Buffalo
Marchioni, Michael P.	E. Tennessee
Marcus, Melvin G.	Arizona State
Marcus, Robert B.	Florida
Maresh, Thomas J.	Oregon State
Mark, David M.	SUNY-Buffalo
Markham, Charles G.	CSU, Fresno
Marlow, Loran D.	SIU-Edwardsville
Marotz, Glen A.	Kansas
Marr, Paul D.	SUNY-Albany
Marriott, Robert	Towson State
Marshall, John U.	York
Martin, Charles E.	Ball State
Martin, Curtis V.	Towson State
Martin, Gene E.	CSU, Chico
Martin, Walter E.	UNC Charlotte
Martinko, Edward A.	Kansas
Martinson, Tom L.	Ball State
Martis, Kenneth C.	W. Virginia
Marts, Marion E.	Washington
Massam, Bryan H.	York
Mastran, Shelley	George Washington
Mather, E. Cotton	Minnesota
Mather, John R.	Delaware
Matley, Ian M.	Michigan State
Matson, John T.	Memphis State
Matthai, James P.	Murray State
Matthews, B.	Waterloo
Matthews, O. Paul	Idaho
Mattingly, Paul F.	Illinois State
Matzke, Gordon E.	Oregon State
Mausel, Paul	Indiana State
Maxfield, Donald W.	N. Illinois
Maxfield, O. Orland	Arkansas
Maxwell, Gayle	Oklahoma State
May, Joseph A.	Toronto
Mayer, Harold M.	Wisconsin-Milwaukee
Mayer, Jonathan	Washington
Mayfield, Robert C.	Boston
Mazzucchelli, Vincent	CSU, Los Angeles
McArthur, David S.	San Diego State
McBoyle, Geoffrey R.	Waterloo
McCall, Ronald M.	Shippensburg

McCann, S. Brian   McMaster
McCaughey, J. H.   Queen's
McCleary, George F., Jr.   Kansas
McColl, Robert W.   Kansas
McConnell, Harold   Florida State
McConnell, John G.   Saskatchewan
McConnell, James E.   SUNY-Buffalo
McCoy, Roger M.   Utah
McCoy, William   Massachusetts
McCune, Shannon   Florida
McDaniel, R.   W. Ontario
McDonald, James R.   E. Michigan
McDowell, Patricia   Oregon
McGee, T. G.   British Columbia
McGrath, G.   Queen's
McGregor, John R.   Indiana State
McIlwraith, Thomas F.   Toronto
McInnis, Donald   SW Missouri State
McIntire, Elliot G.   CSU, Northridge
McIntire, William G.   Louisiana State
McIntosh, C. Barron   Nebraska-Lincoln
McIntyre, Michael P.   San José State
McKay, Ian A.   Wilfrid Laurier
McKee, Jesse O.   S. Mississippi
McKim, Wayne L.   Towson State
McKnight, Tom L.   UCLA
McLafferty, Sara L.   Columbia
McLellan, Alexander G.   Waterloo
McLennan, Marshall S.   E. Michigan
McMurry, John H.   Wilfrid Laurier
McNee, Robert B.   Cincinnati
McNeill, Allen   Massachusetts
McNulty, Michael L.   Iowa
McPherson, Harold J.   Alberta
McQuillan, Aidan   Toronto
McRae, Stephen   Riverside
McTaggart, W. Donald   Arizona State
Meade, Melinda S.   N. Carolina-Chapel Hill
Mealor, W. Theodore, Jr.   Memphis State
Mednis, Roberts J.   Memorial
Meeks, Harold A.   Vermont
Meentemeyer, Vernon G.   Georgia
Mehretu, Assefa   Michigan State
Meierding, Thomas C.   Delaware
Meihoefer, Hans-J.   San Francisco State
Meinig, Donald W.   Syracuse
Menary, John A.   Saskatchewan
Mendelson, Robert E.   SIU-Edwardsville
Mercer, John   Syracuse
Meredith, Thomas   McGill
Merrens, H. Roy   York
Merrill, David A.   Illinois-Chicago
Merrill, Gordon C.   Carleton
Mersey, Janet E.   Sasketchewan
Mesinger, Jonathan S.   Cincinnati
Messenger, A. Steven   N. Illinois
Meuter, Ralph F.   CSU, Chico
Meyer, James T.   Chicago
Michaelsen, Joel   Santa Barbara
Micklewright, Malcolm A.   Victoria
Micklin, Philip P.   W. Michigan
Mieczkowski, Z.   Manitoba
Miernyk, William H.   W. Virginia
Mihalyi, Louis J.   CSU, Chico
Mikesell, Marvin W.   Chicago
Miles, Edward J.   Vermont
Millard, William   NE Illinois
Miller, E. Joan   Illinois State
Miller, E. Willard   Pennsylvania State
Miller, Glenn R.   Rutgers
Miller, Halsey W.   SIU-Edwardsville
Miller, James   SW Missouri State
Miller, Roger P.   Minnesota
Miller, Ronald E.   Pennsylvania
Miller, Stephan W.   Louisiana State
Miller, Theodore K.   Indiana
Miller, Victor C.   Indiana State
Miller, Vincent P., Jr.   Indiana U. of Pa.
Milton, J. D.   Manitoba
Minghi, Julian V.   South Carolina
Minghine, Ernando   Wayne State
Mings, Robert C.   Arizona State
Minkel, Clarence W.   Tennessee
Minnich Richard A.   Riverside
Miron John   Toronto
Missavage, Joseph M.   SUNY-Binghamton
Mitchell, Bruce   Waterloo
Mitchell, James K.   Rutgers
Mitchell, Lisle S.   South Carolina, Hawaii
Mitchell, Richard A.   SUNY-Buffalo
Mitchell, Robert D.   Maryland
Mitchelson, Ronald L.   Georgia
Moeglin, Thomas   SW Missouri State
Moellering, Harold   Ohio State
Mogolesko, Fred   Boston
Momsen, Richard P., Jr.   Calgary
Monahan, Robert L.   W. Washington
Monk, Janice   Arizona
Monmonier, Mark S.   Syracuse
Monroe, Charles B.   Akron
Montgomery, Richard C.   CSU, Fresno
Montz, Burrell E.   SUNY-Binghamton
Moodie, D. W.   Manitoba
Mookherjee, Debnath   W. Washington

Moore, Conrad T.   W. Kentucky
Moore, E. G.   Queen's
Moore, T. R.   McGill
Morain, Stanley A.   New Mexico
Morgan, Donald L.   CSU, Fresno
Morgan, Joseph R.   Hawaii
Moriarty, Barry   N. Carolina-Chapel Hill
Morin, Denis   Sherbrooke
Morley, C. David   York
Morrill, Richard L.   Washington
Morrill, Robert W.   VPI&SU
Morris, John W.   Oklahoma
Morrison, Joel L.   Wisconsin-Madison
Morrow-Jones, Hazel   Colorado
Mosley-Thompson, Ellen   Ohio State
Moss, Michael R.   Guelph
Moulton, Benjamin   Indiana State
Moulton, Gary E.   Nebraska-Lincoln
Mower, Roland D.   North Dakota
Mrowka, Jack P.   Oregon
Muckleston, Keith W.   Oregon State
Muehrcke, Phillip C.   Wisconsin-Madison
Muhr, John   Chicago State
Muhs, Daniel R.   Wisconsin-Madison
Mulamoottil, George   Waterloo
Mulhauser, John   Akron
Muller, Jean-Claude   Alberta
Muller, Peter O.   Miami
Muller, Robert A.   Louisiana State
Müller-Wille, Christopher   Texas A&M
Müller-Wille, L.   McGill
Mulligan, Gordon F.   Arizona
Muncaster, Russell W.   Wilfrid Laurier
Munro, D. Scott   Toronto
Munski, Douglas C.   North Dakota
Muraco, William A.   Toledo
Murdie, Robert A.   York
Murphy, John C.   Maryland
Murphy, Peter E.   Victoria
Murphy, Raymond E.   Clark
Murphy, Richard E.   New Mexico
Murray, Malcolm A.   Georgia State
Murton, Brian J.   Hawaii
Muschett, F. Douglas   Syracuse
Myers, Merle W.   Mississippi State
Myers, Theodore C.   Colorado
Myles, Edward L.   CSU, Chico
Mylroie, John E.   Murray State

Nadeau, Roger   Sherbrooke

Nanji, Razia   Oklahoma State
Nash, A.   Queen's
Nash, Peter H.   Waterloo
Nash, Thomas   Akron
Nasse, George N.   CSU, Fresno
Nasuti, James   Texas
Naughton, Patrick W.   Hawaii
Naujock, Eugene H.   Toledo
Nazzaro, Andrew A.   E. Michigan
Needham, Roger   Ottawa
Neel, Earl M.   Arkansas
Neithercut, Mark E.   Alabama
Nellis, M. Duane   Kansas State
Nelson, Howard J.   UCLA
Nelson, J. G.   Waterloo
Nelson, Robert   Illinois State
Nelson, Ronald E.   W. Illinois
Neuman, Robert W.   Louisiana State
Newcomb, Robert M.   CSU, Northridge
Newman, James L.   Syracuse
Newton, Milton B.   Louisiana State
Nicholson, N.L.   W. Ontario
Nicholson, Sharon   Clark
Nickling, William G.   Guelph
Nicol, Keith S.   Memorial
Niddrie, David L.   Florida
Nieswand, George A.   Rutgers
Nietschmann, Bernard Q.   Berkeley
Nijim, Basheer K.   Northern Iowa
Nishi, Midori   CSU, Los Angeles
Nkemdirim, Lawrence C.   Calgary
Noble, Allen G.   Akron
Noble, William A.   Missouri-Columbia
Nolan, Mary Lee   Oregon State
Norcliffe, Glen B.   York
Nordstrom, Karl F.   Rutgers
Norris, Robert E.   Oklahoma State
Norsworthy, Stanley F.   CSU, Fresno
North, Margaret E. A.   British Columbia
North, Robert N.   British Columbia
Northam, Ray M.   Oregon State
Norton, W.   Manitoba
Nostrand, Richard L.   Oklahoma
Nowak, W. Stan.   Memorial
Nunley, Robert E. Kansas
Nunnally, Nelson   UNC Charlotte
Nystrom, J. Warren   Florida Atlantic

Oberlander, Theodore M.   Berkeley
Obermeyer, Daniel A.   Montana

O'Brien, Bob R. San Diego State
Odland, John Indiana
Officer, E. Roy Waterloo
Ogden, Lawrence E. Michigan
O'Huallachain, Breandan Northwestern
Ojala, Carl F. E. Michigan
Oke, T. R. British Columbia
O'Keefe, Philip Clark
O'Kelly, Morton E. Ohio State
Oldham, Charles C. SW Louisiana
Oliver, John E. Indiana State
Olmstead, Clarence W. Wisconsin-Madison
O'Loughlin, John V. Illinois
Olson, Judy M. Boston
Olson, Ralph E. Oklahoma
Olson, Sherry McGill
Olsson, Carl N. Florida
Olyphant, Greg Indiana
Onesti, Lawrence Indiana
Opheim, Lee A. S. Dakota State
Orme, Antony R. UCLA
Ormrod, Richard K. N. Colorado
Orr, Douglas M., Jr. UNC Charlotte
Osborne, B. S. Queen's
Osleeb, Jeffrey P. Boston
Ostergren, Robert C. Wisconsin-Madison
Ostresh, Lawrence M. Wyoming
O'Sullivan, Patrick Florida State
Outen, Donald Towson State
Owen, Donald E. Indiana State
Owsley, Douglas W. Louisiana State

Packer, R. W. W. Ontario
Padick, Clement CSU, Los Angeles
Paganini, Louis A. Florida
Pagenhart, Thomas H. CSU, Hayward
Palm, Risa I. Colorado
Paludan, Charles T. Tennessee
Pannell, Clifton W. Georgia
Papageorgiou, George McMaster
Paquette, Romain Sherbrooke
Parella, Katherine A. Clark
Park, Siyoung W. Illinois
Parker, Albert J. Georgia
Parker, L. Mayland Arizona State
Parkhurst, David F. Indiana
Parry, John T. McGill
Parson, Helen E. Wilfrid Laurier
Parsons, James J. Berkeley
Pasqualetti, Martin J. Arizona State

Patrick, Larry L. Texas
Patten, George P. Ohio State
Patterson, James E. Illinois State
Patterson, Thomas H. Utah
Pattison, William D. Chicago
Patton, Clyde P. Oregon
Patton, Donald J. Florida State
Pauer, Gyula Kentucky
Paul, Alexander H. Regina
Pawling, John W. Temple
Payne, James E. Indiana U. of Pa.
Peake, Jeffrey S. Nebraska-Omaha
Pearson, Charles E. Louisiana State
Pearson, Ross N. E. Michigan
Pease, James R. Oregon State
Pease, Robert Riverside
Pease, Steven R. San Francisco State
Pederson, Eldor George Washington
Pederson, Leland R. Arizona
Peet, J. Richard Clark
Pemberton, Dixie Ann Maryland
Pennington, Campbell W. Texas A&M
Peplies, Robert W. E. Tennessee
Peruzzi, Duilio San José State
Peters, Bernard C. N. Michigan
Petersen, Albert J. W. Kentucky
Peterson, Gilbert A. W. Washington
Peterson, Michael P. Nebraska-Omaha
Peterson, Raymond A. Ball State
Petras, Elizabeth M. Pennsylvania
Petterson, Janet H. E. Carolina
Petzold, Donald Maryland
Philbrick, A. K. W. Ontario
Phillips, Deborah Akron
Phillips, Phillip D. Chicago
Phipps, Alan G. Saskatchewan
Phipps, Michel Ottawa
Pickard, Claude E. W. Kentucky
Pickard, Jerome George Washington
Picker, Robert D. San Francisco State
Pickles, Andrew R. Northwestern
Pierce, J. T. Simon Fraser
Pigozzi, Bruce W. Michigan State
Piianaia, Abraham Hawaii
Piianaia, Ilima A. Hawaii
Pillsbury, Richard Georgia State
Pinther, Miklos Columbia
Pipkin, John S. SUNY-Albany
Pirie, Peter N. D. Hawaii
Pirkle, Earl C. Florida
Pitts, Forrest R. Hawaii
Place, Richard F. SUNY-Binghamton

Plane, David A.	Arizona
Platt, Rutherford H.	Massachusetts
Pleva, E. G.	W. Ontario
Poiker, T.K.	Simon Fraser
Poluga, Dennis A.	W. Virginia
Ponton, John R., Jr.	Wayne State
Poole, Donald H.	E. Tennessee
Popenoe, Hugh L.	Florida
Porteous, J. Douglas	Victoria
Porter, Philip W.	Minnesota
Poulin, André	Sherbrooke
Pouliot, Marcel	Sherbrooke
Poulsen, Thomas M.	Portland State
Powell, Douglas R.	Berkeley
Pred, Allan R.	Berkeley
Preston, Richard E.	Waterloo
Preston, Valerie A.	Kansas
Price, Edward T.	Oregon
Price, Larry W.	Portland State
Priddle, George B.	Waterloo
Prosperi, David	Cincinnati
Provencher, Leo	Sherbrooke
Prowse, Colin W.	SIU-Carbondale
Prunty, Merle C.	Georgia
Pryde, Philip R.	San Diego State
Psuty, Norbert P.	Rutgers
Pulsipher, Lydia Mihelic	Tennessee
Purvis, John C.	South Carolina
Puzo, Bill	CSU, Fullerton
Pyle, Gerald F.	UNC Charlotte

Quandt, Eldor C.	W. Michigan
Quastler, Imre E.	San Diego State
Quinn, Mary-Louise	Nebraska-Lincoln
Qutub, Musa	NE Illinois

Radell, David	CSU, Los Angeles
Radford, John P.	York
Radok, Uwe	Colorado
Rafferty, Milton	SW Missouri State
Rains, R. Bruce	Alberta
Raitz, Karl B.	Kentucky
Rajagopal, R.	Iowa
Ralston, Bruce A.	Tennessee
Ramseier, R. O.	Carleton
Randolph, James C.	Indiana
Raney, Franklin C.	W. Washington
Ransome, Jack	Windsor
Raphael, C. Nicholas	E. Michigan
Ratick, Samuel J.	Boston
Rau, Herbert L., Jr.	Chicago State
Rauch, Henry	W. Virginia
Raup, Hallock F.	Kent State
Raup, Henry A.	W. Michigan
Raveneau, Jean	Laval
Ray, D. Michael	Carleton
Rayner, John N.	Ohio State
Reed, Robert R.	Berkeley
Reeds, Lloyd G.	McMaster
Rees, John	CSU, Los Angeles
Rees, Peter W.	Delaware
Rees, Ronald	Saskatchewan
Reeves, Richard W.	Arizona
Reeves, Robert G.	S. Dakota State
Regulska, Joanna	Rutgers
Rehder, John B.	Tennessee
Reider, Richard G.	Wyoming
Reilly, Timothy F.	SW Louisiana
Reiman, Robert E.	Appalachian State
Reinelt, Erhard R.	Alberta
Reiner, Thomas A.	Pennsylvania
Reitan, Clayton H.	N. Illinois
Reith, Gertrude M.	CSU, Fullerton
Relph, Edward C.	Toronto
Rengert, George F.	Temple
Rense, William C.	Shippensburg
Renwick, William H.	Rutgers
Retallick, Harold J.	Nebraska-Omaha
ReVelle, Charles	Johns Hopkins
Rex, Arthur B.	Appalachian State
Reynolds, David R.	Iowa
Rheault, Michel	Sherbrooke
Rheumer, G. A.	Simon Fraser
Rhynsburger, W.	Portland State
Rice, John G.	Minnesota
Richards, J. Howard	Saskatchewan
Richardson, Bonham C.	VPI&SU
Richardson, Miles R.	Louisiana State
Richetto, Jeffrey	Alabama
Ridd, Merrill K.	Utah
Riddell, J. B.	Queen's
Riebsame, William E.	Wyoming
Rieck, Richard L.	W. Illinois
Riggs, Karl A.	Mississippi State
Rinier, James A.	Kent State
Ritchot, Gilles	Laval
Roberge, Roger	Ottawa
Roberts, A.C.B.	Simon Fraser
Roberts, Larry D.	S. Dakota State
Roberts, Leonidas H.	Florida

Roberts, M. C.   Simon Fraser
Roberts, Rebecca S.   Oklahoma
Roberts, William M.   S. Mississippi
Robinson, Arthur H.   Wisconsin-Madison
Robinson, David J.   Syracuse
Robinson, J. Lewis   British Columbia
Robinson, Peter J.   N. Carolina-Chapel Hill
Robitaille, Benoît   Laval
Roder, Wolf   Cincinnati
Rodgers, Allan L.   Pennsylvania State
Roepke, Howard G.   Illinois
Rogers, Garry F.   Columbia
Rogers, Jeffery C.   Ohio State
Rogerson, Peter A.   Northwestern
Rogerson, Robert J.   Memorial
Rogge, J. R.   Manitoba
Roine, Jarl   N. Michigan
Romanowski, J. I.   Manitoba
Romsa, Gerald   Windsor
Rooney, John F., Jr.   Oklahoma State
Roscoe, Donald   Mankato State
Rose, Adam Z.   W. Virginia
Rose, Gregory S.   Ohio State
Rose, Harold M.   Wisconsin-Milwaukee
Rose, Damaris   Rutgers
Roseman, Curtis C.   Illinois
Rosenberg, Mark W.   Carleton
Rosenfeld, Charles L.   Oregon State, Hawaii
Rosenthal, Gerson M., Jr.   Chicago
Rosenvall, Lynn A.   Calgary
Ross, William M.   Victoria
Roth, Irvin   Chicago State
Rouffignat, Joël   Laval
Roundy, Robert W.   Rutgers
Rouse, Wayne R.   McMaster
Roweis, Shoukry T.   Toronto
Rowles, Graham   W. Virginia
Rowles, Ruth Anderson   W. Virginia
Rowntree, Lester B.   San José State, SUNY-Binghamton
Rowntree, Rowan A.   Syracuse
Roy, Jean-Marie   Sherbrooke
Rubenstein, James M.   Miami-Ohio
Rudd, Robert D.   Denver
Rudzitis, Gundars   Texas
Rugg, Dean S.   Nebraska-Lincoln
Ruggles, R. I.   Queen's
Rundquist, Donald C.   Nebraska-Lincoln
Rushton, Gerard   Iowa
Russell, Ernest E.   Mississippi State
Russwurm, Lorne H.   Waterloo
Rutherford, G. K.   Queen's

Ryan, Carolyn J.   Temple
Ryan, K. Bruce   Cincinnati
Ryerson, Charles C.   Vermont

Saarinen, Thomas F.   Arizona
Sack, Robert D.   Wisconsin-Madison
Sagar, R. B.   Simon Fraser
Sahir, Abul H.   Regina
St-Onge, Denis   Ottawa
Saint-Yves, Maurice   Laval
Sale, Randall D.   Wisconsin-Madison
Salisbury, Neil E.   Oklahoma
Salter, Christopher L.   UCLA
Samuels, Marwyn   British Columbia
Samuelson, Maynard L.   S. Dakota State
Sanders, Jay S.   W. Virginia
Sanders, Ralph A.   Syracuse
Sanders, Rickie   Indiana
Sanderson, Marie   Windsor
Sandness, Roger K.   S. Dakota State
Sanger, Chesley W.   Memorial
Sargent, Charles S., Jr.   Arizona State
Sas, Anthony   South Carolina
Sauer, Jonathan D.   UCLA
Saunderson, Houston C.   Wilfrid Laurier
Sawatzky, H. L.   Manitoba
Sawchuck, Allan   Wilfrid Laurier
Sawyer, Stephen W.   Maryland
Scarlett, Maurice J.   Memorial
Schlichtmann, Hans G.   Regina
Schmidt, C. Gilbert   Colorado
Schmidt, Else T. A.   Illinois State
Schmudde, Theodore H.   Tennessee
Schneider, Rita   Maryland
Schoen, Meera   Ball State
Schoolmaster, F. Andrew III   North Texas State
Schroeder, Walter A.   Missouri-Columbia
Schul, Norman W.   UNC Charlotte
Schuler, Harry J.   Irvine
Schultz, Ronald   Florida Atlantic
Schwartzberg, Joseph E.   Minnesota
Schwarz, David E.   San José State
Schwarz, Harry E.   Clark
Schwind, Paul J.   Hawaii
Scott, Allen J.   UCLA
Scott, Earl P.   Minnesota
Scott, James W.   W. Washington
Scott, Ralph C.   Towson State
Scott, Steven L.   N. Colorado

Scripter, Sam M. W. Idaho
Scull, Robert Shippensburg
Seaborne, Adrian A. Regina
Seamon, David Oklahoma
Searight, Thomas Illinois State
Searl, Gary H. Oregon
Seawall, Frank CSU, Chico
Seifried, Neil R. M. Alberta
Selden, David George Washington
Seldin, Daniel Indiana
Self, Burl E., Jr. SW Missouri State
Self, Huber Kansas State
Selya, Roger M. Cincinnati
Semple, R. Keith Saskatchewan
Sewell, W. R. Derrick Victoria
Seyler, H. L. Kansas State
Shabad, Theodore Columbia
Sham, Chi Ho Boston
Shannon, Gary Florida, Kentucky
Sharpe, Christopher Memorial
Sharpe, David M. SIU-Carbondale
Shaudys, Vincent K. CSU, Hayward
Shaw, J. Queen's
Shea, Philip E. Carolina
Shear, James A. Georgia
Shelley, Fred M. Oklahoma
Shelton, Marlyn L. Davis
Sheppard, Eric S. Minnesota
Sherman, John C. Washington
Sheskin, Ira M. Miami
Shirey, Ruth I. Indiana U. of Pa.
Shirk, William R. Shippensburg
Shortridge, James Kansas
Showalter, Gerald R. Ball State
Shrestha, Mohan N. Bowling Green State
Shroder, John F., Jr. Nebraska-Omaha, Lincoln
Shuman, Malcolm K. Louisiana State
Shuman, Stanley B. Illinois State
Sibert, John George Washington
Siddall, William R. Kansas State
Siddiqi, Akhtar Indiana State
Siemens, Alfred H. British Columbia
Silberfein, Marilyn Temple
Silvernail, Richard G. South Carolina
Simkins, Paul D. Pennsylvania State
Simmons, James W. Toronto
Simonett, David S. Santa Barbara
Simoons, Frederick J. Davis
Simpson, Jefferson L. UNC Charlotte
Simpson-Housley, Paul Regina
Sims, John H. SIU-Carbondale
Sinclair, Robert Wayne State
Siniard, L. Arnold Memphis State
Sitwell, O. F. George Alberta
Skaggs, Richard H. Minnesota
Slaymaker, H. O. British Columbia
Slocum, Terry A. Kansas
Slorp, Lee H. Miami-Ohio
Slusser, William F. CSU, Fresno
Smerk, George M. Indiana
Smil, V. Manitoba
Smit, Barry E. Guelph
Smith, Albert W. Colorado
Smith, Bruce W. Bowling Green State
Smith, Charles Leroy Texas A&M
Smith, Christopher J. SUNY-Albany
Smith, David A. SUNY-Buffalo
Smith, Derald G. Calgary
Smith, Everett G. Oregon
Smith, G. C. Manitoba
Smith, Kirk R. Hawaii
Smith, Michael W. Carleton
Smith, Nigel Florida
Smith, Paul D. UNC Charlotte
Smith, Peter J. Alberta
Smith, R. H. T. British Columbia
Smith, Neil Columbia
Smith, Richard G. W. Washington
Smith, Richard M. Arkansas
Smith, Richard V. Miami-Ohio
Smith, S. Ivan Alberta
Smith, Raymond C. Santa Barbara
Smith, Rebecca Massachusetts
Smith, Terence R. Santa Barbara
Smith, Thomas R. Kansas
Smith, Tony E. Pennsylvania
Smith, W. Randy Ohio State
Snead, Rodman E. New Mexico
Sobol, John A. Memphis State
Solomon, Barry W. Virginia
Solzman, David M. Illinois-Chicago
Sommers, Lawrence M. Michigan State
Sonnenfeld, Joseph Texas A&M
Sõõt, Siim Illinois-Chicago
Sopher, David E. Syracuse
Sorenson, Curtis J. Kansas
South, Robert B. Cincinnati
Southworth, Frank Illinois
Spelt, Jacob Toronto
Spence, Edward S. York
Spinelli, Joseph G. Bowling Green State
Spurlock, Carl W. Florida
Squires, Roderick H. Minnesota

Srivastava, Harishankar	Ottawa
Stadler, Stephen J.	Oklahoma State
Stafford, Howard A.	Cincinnati
Stager, J. K.	British Columbia
Stahle, David W.	Arkansas
Stallings, Emmett F.	SW Louisiana
Stanek, Oleg	Sherbrooke
Stanislawski, Dan	Arizona
Stankey, George H.	Montana
Stanley, William R.	South Carolina
Staveley, Michael	Memorial
Staver, Allen E.	N. Illinois
Stayert, Paul R.	Florida
Stebelsky, Ihor	Windsor
Steed, Guy	Ottawa
Steila, Donald	UNC Charlotte
Steinke, Theodore R.	South Carolina
Stene, L. P.	Manitoba
Stephens, John D.	UCLA
Stephenson, Richard A.	E. Carolina
Sterling, Henry S.	Wisconsin-Madison
Sternberg, Hilgard O'Reilly	Berkeley
Stetzer, Frank C.	Ohio State
Stevens, Richard E.	Colorado
Stevenson, Marshall L.	Towson State
Steward, Harry	Clark, Hawaii
Stewart, Norman R.	Wisconsin-Milwaukee
Steyn, D.	British Columbia
Stillwell, H. Daniel	Appalachian State
Stine, James H.	Oklahoma State
Stock, R.	Queen's
Stoddard, Robert H.	Nebraska-Lincoln
Stoltman, Joseph P.	W. Michigan
Stone, Clarence M.	Maryland
Stone, Kirk H.	Georgia
Stoops, George	Mankato State
Storey, Keith J.	Memorial
Stout, Chester T.	E. Tennessee
Stoveken, Ruth	Wisconsin-Milwaukee
Stover, Stephen L.	Kansas State
Street, John M.	Hawaii
Strohmeyer, Donald	SIU-Edwardsville
Stuart, Alfred W.	UNC Charlotte
Stuart, Merrill M.	CSU, Fresno
Stump, Roger W.	SUNY-Albany
Stueber, Alan M.	SIU-Edwardsville
Stutz, Frederick P.	San Diego State
Subins, Gunars	Wilfrid Laurier
Sublett, Michael D.	Illinois State
Suckling, Philip W.	Georgia
Sullivan, Michael E.	Ball State
Summers, William F.	Memorial
Sutherland, Stephen M.	Oklahoma
Sutton, Imre	CSU, Fullerton
Swann, Michael M.	Nebraska-Lincoln
Swartz, Robert D.	Wayne State
Swenson, Russell G.	W. Illinois
Taaffe, Edward J.	Ohio State
Taaffe, Robert N.	Indiana
Takizawa, Bill W.	San José State
Tally, Taz	UNC Charlotte
Tamarin, Patricia	Alabama
Tan, Kok-Chiang	Guelph
Tata, Robert	Florida Atlantic
Taube, Sten A.	N. Michigan
Taylor, A. M.	Queen's
Taylor, D. R. F.	Carleton
Taylor, Gordon D.	Carleton
Taylor, H. W.	W. Ontario
Taylor, Lowry	NE Illinois
Taylor, S. Martin	McMaster
Tepper, Leonard P.	Indiana U. of Pa.
Terich, Thomas A.	W. Washington
Terjung, Werner H.	UCLA
Teshera, Robert W.	W. Washington
Thériault, Marius	Laval
Thoman, Richard S.	CSU, Hayward
Thomas, Edwin H.	Illinois-Chicago
Thomas, Morgan D.	Washington
Thomas, Robert N.	Michigan State
Thomas, William L.	CSU, Hayward
Thompson, Bryan	Wayne State
Thompson, Derek	Maryland
Thompson, Gary L.	Oklahoma
Thompson, John	Illinois
Thompson, John H.	Syracuse
Thompson, John L.	Miami-Ohio
Thompson, Kenneth	Davis
Thompson, Noble R.	SIU-Edwardsville
Thomson, Kenneth	SW Missouri State
Thorn, Colin E.	Illinois
Thornton, Charles A.	SIU-Edwardsville
Thrall, Grant	SUNY-Buffalo
Thrower, Norman J. W.	UCLA
Thurston, David L.	Mankato State
Thyagarajan, Sambamurthy	SUNY-Albany
Tiedemann, Clifford E.	Illinois-Chicago
Timofeeff, Nicolay	SUNY-Binghamton
Ting, William S.	CSU, Los Angeles
Tinline, R. R.	Queen's
Tirtha, Ranjit	E. Michigan

Tiwari, R. C. Manitoba
Tobin, Graham A. Iowa
Tobler, Waldo R. Santa Barbara
Todd, D. Manitoba
Torrance, J. Kenneth Carleton
Towle, Jerry C. CSU, Fresno
Toy, Terrence J. Denver
Trapasso, L. Michael W. Kentucky
Traylor, Charles T. Memphis State
Treichel, Georg San Francisco State
Tremblay, Germain Laval
Trenhaile, Alan Windsor
Trewartha, Glenn T. Wisconsin-Madison
Trimble, Stanley W. UCLA
Trotier, Louis Laval
Trott, Charles E. N. Illinois
Troughton, M. J. W. Ontario
Trussell, Margaret E. CSU, Chico
Trussler, Susan Kentucky
Tuan, Yi-Fu Minnesota
Tuller, Stanton E. Victoria
Tunbridge, John E. Carleton
Turkheim, Richard Wilfrid Laurier
Turner, Billie Lee II Clark
Turner, Daniel S. E. Michigan
Turner, Eugene J. CSU, Northridge
Tweedie, Steven W. Oklahoma State

Ulack, Richard Kentucky
Ulrich, Roger S. Delaware
Urell, Joseph T. Miami-Ohio
Urquhart, Alvin W. Oregon

Vale, Thomas R. Wisconsin-Madison
Valenzuela, Carlos R. Ball State
Vance, James E., Jr. Berkeley
Vance, Jean San Francisco State
Vandall, Paul Windsor
van der Eyk, J. J. Toronto
Vanderhill, Burke G. Florida State
VanderMeer, Canute Vermont
Vander Meer, Paul CSU, Fresno
van Doorninck, Frederick, Jr. Texas A&M
van Loon, Harry Colorado
Vann, John H. CSU, Hayward
Van Riper, Joseph E. SUNY-Binghamton
Varady, David P. Cincinnati
Vayda, Andrew P. Rutgers
Veblen, Thomas T. Colorado
Velikonja, Joseph Washington
Vermeer, Donald E. Louisiana State
Vernon, Manfred C. W. Washington
Vicero, Ralph D. CSU, Northridge
Villeneuve, Paul-Yvon Laval
Villmow, Jack R. N. Illinois
Vining, Daniel R. Pennsylvania
Vining, James W. W. Illinois
Vitek, John D. Oklahoma State
Viterito, Arthur George Washington
Viton, Philip A. Pennsylvania
Vogel, Philip E. Nebraska-Omaha
Vreeken, W. J. Queen's
Vuicich, George W. Michigan

Wacker, Peter O. Rutgers
Waddell, Eric Laval
Wagner, P. L. Simon Fraser
Walcott, Wayne A. UNC Charlotte
Wales, Robert W. S. Mississippi
Walker, David B. Maryland
Walker, David F. Waterloo
Walker, Gerald E. York
Walker, H. J. Louisiana State
Walker, Richard A. Berkeley
Wall, Geoffrey Waterloo
Wallace, A. Iain Carleton
Wallach, Bret Oklahoma
Walsh, Stephen J. Oklahoma State
Walter, Bob J. Ohio
Walter, Hartmut UCLA
Walters, William D., Jr. Illinois State
Walton, Grant F. Rutgers
Wang, I-shou CSU, Northridge
Ward, David Wisconsin-Madison
Ward, Robert M. E. Michigan
Warkentin, John York
Warntz, W. W. Ontario
Wasilenko, Michael SUNY-Buffalo
Waterhouse, Alan Toronto
Waters, Nigel M. Calgary
Watts, Michael J. Berkeley
Wax, Charles L. Mississippi State
Waylen, Peter Saskatchewan
Wayne, William J. Nebraska-Lincoln
Weaver, David C. Alabama
Weaver, John C. Wisconsin-Milwaukee
Webb, John W. SUNY-Albany
Webb, Kempton E. Columbia

Webber, Michael J. McMaster
Weber, Charles E. Indiana U. of Pa.
Weber, Neil V. Murray State
Wei Huang North Dakota
Weigend, Guido G. Arizona State
Weightman, Barbara A. CSU, Fullerton
Weil, Connie H. Minnesota
Weir, T. R. Manitoba
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Welch, Ronald Windsor
Welch, Roy A. Georgia
Wellar, Barry Ottawa
Wendland, Wayne M. Illinois
Wernstedt, F. L. Pennsylvania State
Wesche, Rolf Ottawa
West, Robert C. Louisiana State
Wester, Lyndon L. Hawaii
Western, John C. Temple
Westfall, John E. San Francisco State
Westman, Walter E. UCLA
Whaley, Peter W. Murray State
Wheatley, Paul Chicago
Whebell, C. F. J. W. Ontario
Wheeler, David L. Ball State
Wheeler, James O. Georgia
Wheeler, Jesse H. Missouri-Columbia
White, Andrew N. Hawaii
White, Gilbert F. Colorado
White, Kenneth L. Texas A&M
White, Rodney R. Toronto
White, Roger W. Memorial
White, Stephen E. Kansas State
White, Stephen J. Nebraska-Omaha
White, Stuart H. New Mexico
Whitney, Herbert A. Wilfrid Laurier
Whitney, Joseph B. R. Toronto
Whyte, Anne V. T. Toronto
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Wightman, W. R. W. Ontario
Wikkramatileke, Rudolph Victoria
Wilcox, Jean E. Montana
Wilhelm, Hubert G. H. Ohio
Wilkie, Richard W. Massachusetts
Wilkinson, Paul F. York
Wilkinson, Thomas P. Carleton
Williams, Anthony V. Pennsylvania State
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Williams, Donald L. S. Mississippi
Williams, Jack Michigan State
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Williams, Jerry R. CSU, Chico
Williams, Lynden S. Ohio
Williams, Peter J. Carleton
Williams, T. H. Lee Kansas
Willmott, Cort J. Delaware
Wills, Bernt L. North Dakota
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Wilner, Arthur S. Dakota State
Wilson, Alan Pennsylvania
Wilson, Andrew W. Arizona
Wilson, J. W. Simon Fraser
Wilson, Michael R. Saskatchewan
Wilson, Paul B. Montana
Wilson, Zaphon R. Appalachian State
Winberry, John J. South Carolina
Wingert, Everett A. Hawaii
Winkler, Julie A. Nebraska-Lincoln
Winsberg, Morton D. Florida State
Winsor, Roger A. Appalachian State
Winston, Barbara NE Illinois
Winter, Robert E. CSU, Hayward
Winters, Harold A. Michigan State
Wise, Daniel W. Illinois
Wiseman, F. M. Louisiana State
Wiseman, Robert F. Kansas
Wishart, David J. Nebraska-Lincoln
Wisner, Benjamin Wisconsin-Madison
Withington, W. A. Kentucky
Wittick, Robert I. Michigan State
Wixman, Ronald Oregon
Wohlenberg, Ernest H. Indiana
Woldenberg, Michael SUNY-Buffalo
Wolf, Laurence G. Cincinnati
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Xin-yuang Huang	SUNY-Binghamton
Yahr, Charles C.	San Diego State
Yapa, Lakshman	Pennsylvania State
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Yasso, Warren E.	Columbia
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Zimmerman, A. L.	Montana
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- California State College, Stanislaus
- * University of California, Irvine

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- Central Connecticut State College
- Southern Connecticut State College

FLORIDA
- University of South Florida

ILLINOIS
- Roosevelt University

KENTUCKY
- Eastern Kentucky University

LOUISIANA
- Northeast Louisiana University

MASSACHUSETTS
- Boston State College
- * Harvard University

MINNESOTA
- Bemidji State University
- St. Cloud State University

NEW JERSEY
- Montclair State College
- William Paterson College

PENNSYLVANIA
- California State College
- * University of Pittsburgh
- West Chester State College

RHODE ISLAND
- University of Rhode Island

TEXAS
- East Texas State University
- University of Texas at Dallas

UTAH
- Brigham Young University

WEST VIRGINIA
- Marshall University

CANADA, ONTARIO
- Trent University